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1st NATIONAL SEMINAR
on
AGRICULTURAL MARKETING

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September 7-27, 1965

PAPERS PRESENTED

AT THE

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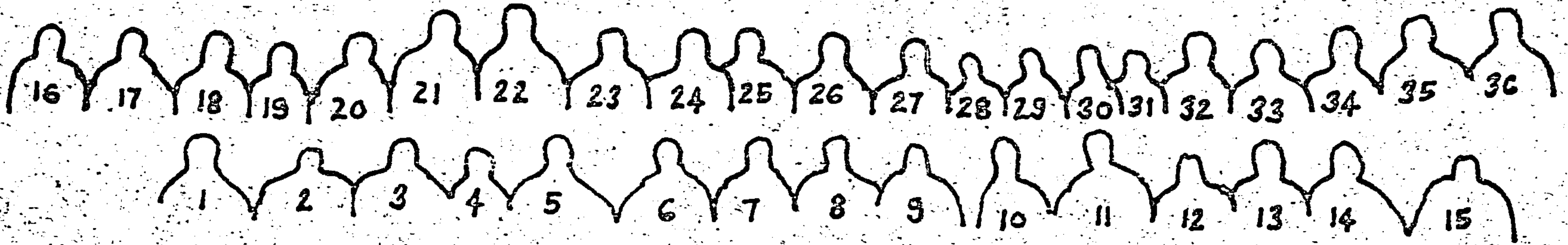

STAFF AND PARTICIPANTS
FIRST NATIONAL SEMINAR ON AGRICULTURAL MARKETING
WHO Building, U. N. Avenue
Manila, Philippines

NATIONAL
MARKETING

Edited

by

Dr. FABIAN A. TIONGSON
Assistant Professor
Department of Agricultural Economics
College of Agriculture
University of the Philippines

Los Baños, Laguna

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PREFACE

Pursuant to the Resolution of the FAO Regional Conference held at Kuala Lumpur, Malaysia in 1962, the establishment of a National Seminar on Agricultural Marketing, patterned after that of the Malaysia Center, has been realized and was held from September 7-27, 1965 at the World Health Organization Conference Hall in Manila. It is a joint undertaking between the Philippine Government and the Food and Agriculture Organization of the United Nations.

The main purpose is to provide in-service training in agricultural marketing to personnel of government and private agencies interested in the improvement of agricultural marketing systems in the Philippines. The offices represented were the National Cottage Industries Development Authority, National Economic Council, Central Cooperative Exchange, Inc., Bureau of Animal Industry, Bureau of Agricultural Economics, Mindanao Institute of Technology, Bureau of Plant Industry, Rice and Corn Board, Office of the Secretary of National Defense, Bureau of Commerce, Rice and Corn Administration, Armed Forces of the Philippines, Philippine Sugar Institute, Agricultural Credit Administration, University of the Philippines College of Agriculture, Agricultural Credit and Cooperative Institute, International Rice Research Institute and the Philippine Fisheries Commission.

This compilation contains three types of documents: (1) papers prepared especially for the seminar and presented by the foreign and local staff, (2) field survey reports on marketing of agricultural products in selected areas, conducted and presented by the participants, and (3) remarks and addresses during the opening and closing ceremonies. All papers were issued in mimeographed form during the seminar, which were later reviewed and edited. While the views expressed in these proceedings are personal views of their respective authors, the facts were further crystalized in open discussions and were, therefore, the fruits of long experience in agricultural marketing.

The publication of this volume had been prompted by the quality of the materials presented in the seminar. Many requests for the papers discussed in the seminar have been received from individuals and organizations. Too, we believe that this publication will help stimulate interest in the study of improved agricultural marketing systems in the Philippines. It is also hoped that the benefits derived from this seminar will serve as comprehensive reference on the marketing of agricultural products under Asian conditions.

Sincere appreciation are due the authors and the editorial consultant. Their efforts will help build the much needed fund of information on agricultural marketing for the Region that can bring about significant improvements in the economic conditions of their people. Desirable changes may be their best rewards as well as of the others who have contributed to the success of the First National Seminar on Agricultural Marketing.

(Sgd.) EUGENIO E. CRUZ
(Director of Plant Industry)
Director of Seminar
and
Chairman, Organizing Committee

CONTENTS

Page

INTRODUCTION ix

PART I — TECHNICAL PAPERS

1. Agricultural Marketing and Economic Development — *F. A. Shah* 1
2. Markets, Their Organizations and Functions — *B. B. Arzadon* 10
3. Preparation of Agricultural Products for Marketing with Particular Emphasis on Packing and Transporting — *Eugenio V. Mendoza* 20
4. Market Intelligence and Statistics — *F. A. Shah* 27
5. Grades, Standards and Quality Control in the Philippines — *Remedios E. Racela* 37
6. Grades, Standards and Quality Control in Some Foreign Countries — *H. J. Mittendorf* 42
7. Grades, Standards and Quality Control in Some Foreign Countries — *F. A. Shah* 53
8. Storage and Warehousing of Foodgrains — *B. B. Arzadon* 64
9. Price Policies Including Stabilization and Buffer Stocks — *B. B. Arzadon* 75
10. Economic Considerations on Planning Cold Stores for Agricultural Perishables — *H. J. Mittendorf* 85
11. Marketing Research, Methodology and Techniques — *Filemon T. Berba* 94
12. Losses in Marketing of Agricultural Products — *H. J. Mittendorf* 100
13. Data on Marketing Costs and Margins to Measure Marketing Efficiency — *H. J. Mittendorf* 107
14. Training for Efficient Marketing — *F. A. Shah* 116
15. The Role of Marketing in the Implementation of Price Policies — *B. B. Arzadon* 125
16. The Role of Credit in the Marketing of Food and Agricultural Products — *Orlando J. Sacay* 131
17. Marketing Boards — *H. J. Mittendorf* 137
18. Agricultural Marketing Extension and Demonstration — *F. A. Shah* 142
19. Role of Cooperatives in the Philippine Land Reform Program — *Pablo N. Mabbun* 154

20. The Role of Cooperatives in Marketing and Supply — *B. B. Arzadon* 168
21. Merchandizing of Farm Products — *Fabian A. Tiongson* 178
22. Marketing Legislations — Regulation of Markets — *B. B. Arzadon* 199
23. Projecting Demand for Agricultural Products — *H. J. Mittendorf* 211
24. FAO'S Role in Agricultural Marketing Development — *F. A. Shah* 223

PART II—FIELD SURVEY REPORTS

1. Group A — Marketing of Fruits and Vegetables in Some Selected Localities in the Philippines, 1965 231
2. Group B — Marketing of Poultry and Eggs 251
3. Group C — Marketing of Palay and Rice 264
4. Group D — Marketing of Abaca in Camarines Sur and Albay 284
5. Group E — A Report on the Study of the Marketing of Coconut Products in San Pablo City and Neighboring Towns of Laguna 288

PART III — RESOLUTIONS 308

PART IV — REMARKS AND ADDRESSES

A. OPENING CEREMONIES —

1. The First National Seminar on Agricultural Marketing in the Philippines — *Eugenio E. Cruz* 311
2. Opening Address — *F. A. Shah* 314
3. Opening Ceremony — *Stig Andersen* 316
4. Complexity and Challenge in Agriculture — *Jose Y. Feliciano* 318

B. CLOSING CEREMONIES —

1. Short Talk — *H. J. Mittendorf* 323
2. A Brief Evaluation — *F. A. Shah* 325
3. Short Commentary — *Vicente U. Quintana* 327
4. Some Imperatives of Economic Development — *Armand V. Fabella* 329

APPENDIX

A. List of Seminar Participants 336
B. List of Staff and Lecturers 338
C. List of Committee Members 339

Introduction

Agricultural Marketing is an important tool in the development of the agricultural economies not only of the Philippines but also of Asia and the Far East. In most of these countries, national governments have organized some services to improve their marketing systems. In the Philippines, agricultural cooperatives and marketing associations have been organized to improve the efficiency of the farmer in the sale of his produce and to make available to the consumers at reasonable prices adequate quantities of food and agricultural commodities.

One of the main hurdles to marketing improvement work in most of the Asiatic countries, the Philippines among them, seems to be the lack of technically-trained personnel and the lack of training facilities in the region. The Food and Agriculture Organization of the United Nations is assisting the countries in this connection by providing specialists and by granting a limited number of fellowships for training in foreign countries. Assistance is also being provided by organizing in the developing countries short-term in-service training centers in agricutural marketing which may ultimately lead to the establishment of permanent institutes for training and research in marketing.

The establishment of the First National Seminar in Agricultural Marketing is a result of the assistance provided by the Food and Agriculture Organization of the United Nations, with the main purpose of providing in-service training in agricultural marketing to personnel of government and private agencies interested in the improvement of agricultural marketing systems in the Philippines. The papers presented were that of foreign and local information supplemented by the group reports on actual survey studies by the participants.

These seminar proceedings are intended to supply a long need for informative materials not only by students of agricultural marketing but also by all farmers in Asian countries for the upliftment of the living standards in the rural areas.

PART I

TECHNICAL PAPERS

AGRICULTURAL MARKETING AND ECONOMIC DEVELOPMENT

F. A. Shah
FAO Regional Marketing Specialist
Asia and the Far East

Introduction

The economic development in most of the countries in Asia and the Far East Region is closely associated with the development of agriculture as over two-thirds of the population mainly depend upon it. In many cases, agriculture constitutes the main source of foreign exchange earnings and government revenues.

Some of the outstanding features of the agricutural economies in a large number of countries include low level of literacy, chronic indebtedness, high rates of interest, small farms, primitive methods of agriculture and low yields per unit of land. The merchant-money-lender marketing system together with its defects, e.g., tied sales and lower return to farmers, is still common. With more than one-half of the world population concentrated in this region, and its contribution to world food production being only a little over than one quarter of the total, the prevalence of malnutrition and hunger in many parts is not unexpected. Considering the rate of annual increase of about 2.2 per cent in population in most of the countries, and the present unsatisfactory food situation, there is an urgent need for increasing the quantum and quality of food and agricultural production. Since the farmer has to take final decisions concerning the employment of the various factors of production, his full cooperation is needed to carry on the national development plans to a successful conclusion. This will obviously be determined to a great extent by the price he receives from the sale of his produce and thus by the efficiency of the agricultural marketing system.

Importance of Marketing

The marketing of agricultural products is vitally important as it has a direct impact on the consumer, the producer and the economic development of a country. The consumers are hurt by high marketing costs. If there is no market outlet farmers will not produce beyond their own needs.

Since a large part of the price is often made up of marketing costs, it is clear that high marketing costs are an important reason why some people have not enough food. The more these costs can be reduced, therefore, the easier will it be for poor consumers to get the food they want. This aspect is all the more important in that the proportion of the population living away from farms and dependent on the marketing system for their food is increasing rapidly.

If the producer cannot see an easily accessible market outlet where he can sell the food he produces beyond his own needs, then he has little incentive to produce it. The need to provide adequate incentives for increased production is all the more pressing when set against the rate at which the world population is increasing. It is estimated that the present world population of over 3,000 million is likely to double itself by the turn of the century, representing an almost equal number to feed.

Effective marketing is also critical for the success of development programs designed to uplift a population as a whole. In spite of the strides in industrialization being made in many less developed countries to break through the "circle of poverty", a large section of the population must continue to depend for their living on agriculture. Any plan of economic development that aims at diminishing the poverty of the agricultural population, reducing consumer food prices, earning more foreign exchange or eliminating economic waste, has, therefore, to pay special attention to the development of efficient marketing for food and agricultural products.

To implement economic development plans, increased earnings of foreign exchange are needed by all countries to finance imports of essential capital goods. Therefore, agricultural exports will have to be expanded in quantity and value. Better sales methods can contribute a great deal towards achieving this objective. The maintenance of quality standards in which foreign buyers can have full confidence can also contribute much to export earnings.

Basic Conditions for Agricultural Development

Scientific methods of farming in general use in the more advanced countries, properly applied to the conditions of those economically less developed, could lead to immense increase in output. This calls, however, for extra effort and cash outlay by farm operators which they are only likely to make if there is a clear prospect of benefit thereby. While adequate incentives at the farm level will not guarantee that all farmers will make the additional efforts needed to increase production, their absence will certainly mean that such efforts are unlikely to be made. Three basic conditions are of special importance to assisting market demand to provide production incentives.

1. **Reasonably stable prices for agricultural products at a remunerative level.** Unless they have confidence that prices will bear some minimum relationships to costs, farmers will hesitate before incurring additional work or expense to increase their output or raise its quality.

2. **Adequate marketing facilities.** The marketing system should ensure that growing urban demand, and stabilized prices, and differentials for quality at the processing or consuming level, are actually reflected in cash incentives to the producer and are not lost en route.

3. **A satisfactory system of land tenure.** The effect of market incentives for increased and improved production will be greatly reduced if the system of land tenure results in a large share of returns for any increased production accruing to landlords. Moreover, farmers will hesitate to incur the expense and effort needed to improve their holdings unless they have reasonable security of tenure.

Although each of the three basic conditions mentioned above deserves one or more lecture periods for discussion, emphasis in this lecture is placed on prices and marketing only which are closely associated. You will also be hearing more on prices during the course of this seminar.

Uncertainty as to Prices

A strong tendency towards price instability is inherent in the marketing of agricultural products because of the seasonal concentration of output, great difficulties in adjusting production closely to demand in view of the uncertainties of weather and yields, and the relatively low price elasticities of demand for the basic farm food products. Price fluctuations are particularly severe in economically less-developed countries, because most producers are forced to sell immediately after or even before the harvest to meet essential living expenses or to repay debts. In Cambodia, for instance, prices of paddy in January and February, just after harvest, are said generally to be barely half of those prevailing in July and August, while in Colombia the immediate post harvest price of potatoes is often no more than one-third of that realized later in the season. Many citrus orchard owners in Iran sell their fruits three to five months in advance of maturity in order to obtain cash advances. This provides some insurance against the risk of total loss from crop damage. However, according to the reports of FAO Marketing Specialists, if the growers in one village near Meshed, for example, had sold their 1960 crop even at the seasonally low price prevailing at picking time, they would have obtained over $10,000 more for it than what they actually received.

Where commodity markets are narrow, these price fluctuations are often magnified by speculative activities. Sharp increases in prices after the bulk of a seasonal crop has moved into wholesale channels oftentimes discourage consumers and export buyers to purchase further. The sharp increases in prices, however, do not bring any benefit to the producer.

Price instability may also be increased by the natural reaction to price changes of subsistence farmers whose family food needs are sometimes inadequately met. When prices are low they may have to sell more of their output in order to satisfy their minimum needs for cash, and so intensify the downward pressure on prices. On the other hand, when prices are high, some may be able to afford to sell less, and consume more for themselves, thus increasing the shortage on urban markets and forcing prices still higher.

So long as most of the price risks are left for farmers to bear, it is not reasonable to expect them to adopt better production methods which usually require a larger initial outlay of cash and effort; some protection against unduly low prices seems essential, at least at a level sufficient to cover their out-of-pocket expenses. In the less developed countries, large sustained payments to agriculture from other sectors of the economy of the kind common in industrialized countries such as the U.S.A. are ruled out by the small size of the non-agricultural sectors, and the general low level of consumer incomes. Quite the opposite, their governments have often maintained relatively low price ceilings for foodstuffs in the interest of consumers which, in the face of rising costs, have discouraged production, and because they allowed inadequate differentials for quality, have dampened incentives to maintain it.

Even if farm prices were effectively stabilized at a level no higher than would correspond to the average price that consumers were willing to pay, less current distribution costs in the more efficient channels, farmers in most less-developed countries would gain considerably, and would be much more confident that efforts to expand production would be rewarded. Several countries have been working toward this end by means of government purchasing and buffer stock operations, designed to remove supplies from the market in periods of low prices and release them later when prices rise, coupled with regulation of imports and exports. In Costa Rica and Panama, for example, as in many other countries, this has been accomplished by setting up government sponsored buying and storage agencies to which producers may sell at a guaranteed minimum price if private traders offer less.

Protection to farmers against the risk of price fluctuations is afforded on an individual enterprise basis when a wholesale processor of sugar or vegetables, for example, guarantees a specific price to growers by contracts made in advance of planting. In return, the processor can achieve a measure of control over production, etc. which facilitate more efficient operation of his processing plant. However, many farmers have sad experience of the methods—manipulation of quality appraisal, raising the percentage of "rejects", etc.—to which some processors bound by contract resort to reduce their average supply cost when the price of the processed product falls below expectation.

Price stabilization for agricultural commodities produced primarily for export is an altogether more difficult problem than price stabilization on domestic markets. International commodity price stabilization agreements are difficult to negotiate and have not been uniformly successful. A country with a major share of the world market for a particular commodity may attempt to stabilize international price levels by regulating marketed supplies unilaterally, e.g., Brazil for coffee, but such action requires considerable financial resources and, even then, most of the benefit is likely to go to competitors. As a rule, therefore, national efforts have been directed mainly to cushioning the effects of world price fluctuations on domestic markets. The mechanisms used include the accumulation of reserve funds from export proceeds in times of high prices in order to augment returns to growers when prices are low, e.g., the West African marketing boards for cocoa; the imposition of variable export taxes, e.g., on tea from India; and delaying adjustments in exchange rates for export commodities selling in favorable markets, e.g., Uruguay for wool, Colombia for coffee.

Difficulties in Getting Incentives Back to Producers

Clearly, favorable and stabilized prices can exercise their effect on production only to the extent that the producer actually receives them; a condition which is not always fulfilled. Substantial modification of existing marketing systems is usually needed if small farmers in less-developed areas are to receive these prices and applicable quality differentials. Though comparisons of marketing margins are notoriously deceptive, an example from Indonesia gives a rough idea of the impact of marketing costs on farmers' share of the prices paid by consumers. Out of an average 1956 consumer price in Djakarta of 369 rupiahs for rice from West Java equivalent to 100 kilograms of paddy, 199 rupiahs (over 46 per cent) went to marketing costs even in a channel with government participation and subsidy. Returns to farmers who had obtained advance credit from merchants against their crop would be materially less. Wasteful and inefficient organization and handling, lack of competition between marketing channels coupled with producer and consumer weakness in bargaining with wholesalers and retailers, were among the main causes of the higher margins observed. In some cases, wholesaler and retailer together realized over 100 per cent return on the purchase price of a product turned over at least once a month. In high income countries, savings through more efficient marketing are often put into consumer services and sales promotion; where the majority of consumers are poor, savings in marketing costs should be reflected in price benefits either to the consumers, or the producers, or to both.

Credit

Lack of financial resources forces many small farmers to seek loans in times of scarcity, especially prior to the harvest, and thus they may become heavily indebted. Often they are then obliged to sell their products through the money-lender year after year, at prices substantially below those prevailing in the free market—and reported by statistical agencies—as a condition of renewing the loan. Credit difficulties are also the main cause of many failures to meet the desired standards of quality. Thus, for lack of financial resources, coconut growers may be forced to pick nuts before they are ripe, while for the same reason copra producers may be forced to dispose of stocks before they are properly dried. Clearly, the adoption of improved methods of processing which would involve additional cash outlays is also impeded.

The rate of interest charged to small producers in economically underdeveloped countries seems prohibitive by commercial standards elsewhere. Examples of 10 per cent per month (120 per cent per annum) or more for small tenant farmers in this region are often reported—though the proportion of agricultural output affected by such charges is not given. Where the taking of interest is forbidden by law and religious principles, the effective rate is concealed by making loans to be repaid in kind assessed at a low price to the creditor.

Where, as is often the case, crops and livestock are the only marketable security for a loan, the need to see that they do not leave the possession of the borrower except in repayment of it makes a close link between the source of credit and the sale of the security essential. The much criticized merchant-money-lender system is the result. Its replacement by alternatives, equally efficient but less costly and more advantageous to farmers, has been the subject of many investigations and proposals. One partial solution has been found in Taiwan where fertilizers are supplied to farmers on credit by the Provincial Food Bureau against later repayment in rice. A strong network of credit and marketing cooperatives has been built up in Japan where they have been made official buyers for the monopoly Government Food Agency. However, the Rice Committee of Malaya, for example, reported in 1959 that cooperatives could not be expected to compete successfully with the village shops, which supplied farmers with their daily necessities as well as buying their produce and offering credit.

In practice, the most effective means of assuring that the producers obtain appropriate prices for their produce seems to be the extension back towards them of the intake channels used by domestic or export stabilization agencies. Thus, the purchasing programs of Latin American development banks and supply institutes have often only come into effect in outlying areas when a direct buying unit was opened there. The Nigerian Cocoa Marketing Board publishes the lowest prices which its agents should pay to farmers at established country buying stations, as well as its buying price at ports of shipment. The farmer is thus able to go to the nearest buying station and obtain these prices instead of accepting whatever independent local buyers may offer. At the same time the buying agents are still free to offer prices above the minimum, if savings can be realized through more efficient transport or larger turnover, for example.

Usually, the existence of such local buying stations is enough to induce other market channels to offer a comparable price and there is no need to take up a large part of the total crop marketed. A practical problem is that the buying points must be sufficiently widely distributed to be within reach of most farmers. In Ceylon, where such a system is being developed, it has been reported that growers had to sell to private traders at less than the official prices for lack of easily accessible government buying stations. Yet the maintenance of an extensive network, which may not necessarily have a high turnover, inevitably involves high costs. It has also proved difficult in some countries to ensure that official buyers and graders apply appropriate differentials for quality, in face of strong local pressures and temptations to misuse their position.

Transportation and Storage

Inadequate transport and storage facilities cause much waste and are a direct impediment to the development of marketing in many areas. At a 1948 FAO meeting in the Philippines, it was estimated that more than 10 million tons of rice was lost in the world, 1947-1948, because of inadequate storage. Although this situation has improved, there is still a need both for wider application of techniques already available, and the further construction of strategically located storage, drying and fumigating facilities.

Owing to their scarcity, the ownership of storage facilities is sometimes an issue in less-developed countries. Merchants in control of the limited storage available are said to have profited unduly from speculative operations, and many countries are turning increasingly to public ownership of storage for politically sensitive commodities. That the stimulation of competition by local enterprise can also achieve desirable results in such environments is evidenced by a recent survey of cold stores in the State of Bihar (India).

Lack of means of transport is often responsible both for high marketing costs and for the continuance of subsistence farming. In 1957, it was estimated by an FAO Marketing Specialist that in Syria the cost of transport to Latakia of grain for export immediately after harvest amounted for many farmers to about 40 per cent of the export price of wheat and 50 per cent of that for barley. Production is often restricted to the needs of local village markets until low cost transport facilities make other outlets accessible. In parts of the Philippines, for example, subsistence crops like rice and corn are often raised in place of potentially more profitable crops such as Manila hemp, because of the difficulty of bringing the produce to the market. Many important agricultural areas are linked with the outside world only during the dry season of the year and valuable fresh fruit, for example, is wasted as a railroad station is 45 miles, to a navigable waterway, 20 miles, to a road usable during most of the year, 6 miles.

It is also important to adopt existing transport facilities to the special demands of perishable foods such as meat, fresh fruit and vegetables, and milk, which generally call for the use of refrigeration. Apart from their capital cost, refrigerated vehicles can only be used economically with good roads and rail connections, and with prompt and efficient servicing which is often difficult to ensure. The problem of assembling an economic cargo and distributing shipments profitably at destination points, often makes it difficult to introduce refrigerated transport services, especially refrigerated shipping. Meanwhile, the absence of this link with suitable markets is in itself the reason for the lack of adequate supplies to justify a service, and of proper distribution facilities. Thus, there are now enough retailers equipped with refrigerated display cabinets in Hong Kong, for instance, to handle a consignment of frozen poultry, whereas formerly the periodic arrival of large deliveries of carcass poultry from the mainland brought about a sharp drop in prizes because of the need for immediate disposal.

Handling and Grading

Lack of care and forethought in handling and packing cause much wastage in marketing. Often this is encouraged by traditional sales practices. In the Near East, much fruit is sold on the tree; it is picked by a contractor, who may let out the work to a third party with no direct interest in the price obtained for the crop. Shrinkage in weight and losses of livestock from death and crippling in some countries of Latin America, and in the shipment of live pigs as dock cargoes to Hong Kong, for example, are far in excess of those prevailing over comparable distances in other areas. Radical solutions such as the slaughtering of the livestock near the production point and transport of their meat to the market under refrigeration are not always applicable. A 1956 study made on behalf of Thai exporters showed that the price discount on refrigerated as against fresh meat in Hong Kong markets more than counterbalanced the potential savings in transport. Full account must be taken of local food habits and preference. At that time, there was a 33 per cent discount on the price of frozen and chilled beef in the retail markets, though not in the hotel or restaurant trade which took 15 to 20 per cent of the supply.

The same study also indicated that Hong Kong merchants would like to import more Thai products but had frequently been disappointed in terms of quality, quantity or time of delivery. The risk and costs of shippings to distant markets are too high to make dealing in unstandardized products profitable when competing countries are conforming more strictly to sale contract specifications. An example is the issuance of official certificates of quality of vegetable oil exported from Mainland China by a state testing bureau. There is still much scope for improvement in this direction.

Quality improvement is also hampered frequently by the system of pricing employed at the farm level. Deductions for impurities and shrinkage are applied indiscriminately in many South East Asian and export markets, hence discouraging the proper cleaning and drying of grain at the farm. FAO specialists engaged to promote the adoption of better methods of preparing produce for the market have often found their work obstructed by inability to obtain appropriate price premiums.

Produce of different types and qualities is often sold without regard for varying consumer preferences and their willingness to pay for them. Effective market research to determine the nature of these preferences and the adoption of processing, packaging and distribution procedures adapted to them, might again permit greater consumer satisfaction and higher returns to the producers.

Market Information

Information on current and prospective market conditions is characteristically weak in less-developed countries; contributing factors are the large number of small enterprises involved, defective communications and illiteracy. This is a major limitation on farmers' bargaining power, and also leads wholesale buyers to seek wider margins as a hedge against price changes in distant markets which they may not know about. Thus, in 1954, the price of a sheep in Djibouti was at one time $3.70 to $4.70. Because of poor marketing organization and information, the price in the country 120 miles away was only about $1.90.

Also, because of the lack of market information as to the prospective value of produce and where they could sell it advantageously, farmers may not even try to grow and market some crops in current demand for which their land is suitable. Inadequate market information is likewise a frequent cause of physical waste, e.g., when perishable fruits and vegetables from distant points are shipped to an already satiated market. Sound price and supply information is based upon standard definitions of type and quality, uniform weights and measures and representative lots of produce in the market. At present, many of these attributes are uncertain.

Local radio services and newspapers are generally willing to disseminate market information if it can be placed in their hands on time. Collection of data and interpretation of terms in which local farmers and traders can understand may, however, require initiative and assistance from a public marketing improvement agency. The cooperation of local market authorities may also be needed in the collection of such information and broadcasting it by loudspeakers, for example, in centers where individual means of access to other news media is limited. This is one of the responsibilities of the Market Committees set up under the market regulation programs in India and Pakistan.

To Sum Up

While efficient marketing is directed initially towards helping the producer and the consumer, it is also a vital component and instrument of the economic and social development of a country. The plans for increased agricultural production can be achieved only with efficient marketing facilities that will enable producers to earn the rewards of increased effort and thereby provide necessary incentives to larger production. Further, the benefits of increased agricultural production can be spread widely among the whole population only by good marketing.

Increase in national income and foreign exchange earnings can be achieved by expansion of existing markets and development of new markets, both external and internal. The role of marketing in promoting exports of agricultural commodities has already been indicated.

Marketing also acts as the nerve system of an economy in indicating consumers' requirements to the producers. It aims at guiding production purposefully to maximize consumers' satisfaction and producers' income. While economic development policies can make provision for the improvement and expansion of agriculture, central planning cannot be expected to prescribe the priorities in the matter of crops to be grown when several alternatives are available to the farmer. Only efficient marketing can perform this function of making the producer aware of what the consumer requires and of the quality and grades preferred by him. Moreover, the planning authority can direct agricultural production towards a selected pattern by intelligent price policies, provided they are combined with efficient marketing.

Problems of agricultural credit and finance and of capital formation in the agricultural sector have received serious and active attention from many Asian governments. The part played by marketing in these spheres is being increasingly appreciated. Improved marketing in all its aspects, especially the development of cooperatives, marketing and credit, could be an effective instrument for creating and mobilizing rural savings for the economical development of the country.

Marketing has also a social significance. For in a society that seeks to make use of human beings, efficient marketing enables the farmer to enjoy that sense of belonging to society, by helping him to exchange to the best advantage the fruits of his labor for his material needs and by providing incentives for him to increase his contribution to meet the material needs of others.

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MARKETS, THEIR ORGANIZATIONS AND FUNCTIONS

Bibiano B. Arzadon
ECAFE/FAO Agriculture Division
Bangkok, Thailand

In most countries of Asia and the Far East, plans to adopt improvements in their marketing systems are thought of or are now in the process of implementation. As a result, these countries are undergoing a transformation from the undeveloped type to the modern system of marketing. In this process of transition, specialized markets have grown up—local assembly, local retail, central wholesale, etc.—and even to the establishment of exchange where commodities can be traded on the basis of samples and description only. These, however, have brought about difficulties in market price determination, the prevalence of unfair marketing practices, and damages to commodities in transit or in storage.

In this context, it would thus be desirable to know first the concept of the "market" in order to allow us to delve further into the understanding and the analysis of the organizations and functions of markets.

Concept of the "Market"

The term "market" is often loosely used. For instance, when reference is made to "Bangkok market for mangoes" we probably mean the thousands of consumers of mangoes and the demand which then existed as a result. On the other hand, when we refer to the "Manila market for raw cotton", we do not think of the consumers in Manila at all, but of the comparatively small number of dealers in raw cotton which are situated in this city and through their hands much of the raw cotton produced in the Philippines or imported from abroad are channelled. The point brought out in this case is that the very term used, with the city's name and the commodity changed, connotes entirely different things.

The term "market" might also mean the condition of trade in a commodity, e.g., "the market was slow yesterday". It may also mean another thing when we try to show the current general level of prices as when we say "the market is high today". "Market" might also constitute a building or open space where farmers go to sell their products.

The economist, on the other hand, would refer to "market" in connection with price-making forces. This is the very core of the concept in our discussion.

What is a "market"? It is an "area in which exchange can take place".[1] Under this definition, the limits of a particular market are determined not so much on the geographical or other physical aspects of the market but more on the political and monetary barriers. So that a market could be defined as "a trading area in which substantially homogeneous conditions of supply and demand are encountered".[2] In this connection, supply and demand are deemed to be homogeneous when:

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[1] Abbot, J. C., Marketing Problems and Improvement Programmes (FAO, Marketing Guide No. 1, Rome: 1958, p. 26.

[2] Thomsen, F. L., Agricultural Marketing (McGraw Hill Co., Inc.), N.Y. 1951.

a. there is free mobility of the product within the area, so that if prices in one of the markets are unfavorable, there could be a movement into or out of that sphere, thus prices could be equalized in the area after considering the differences in the cost of transportation;

b. there is adequate communication among prospective buyers and sellers in the area in order to allow both to have simultaneous access to the needed information regarding supply, stock, sales, prices, etc.

For instance, a country which imposes high tariff barriers or allows almost no foreign exchange for imports would cut off to a considerable extent its internal markets from all others. On the other hand, under free marketing conditions, for instance, a copra exporter in the Philippines is just as responsive to the changes in prices in the U.S. Westcoast.

Since it is hard to clarify generally the markets into distinct types in view of various sizes and types of markets for farm produce, it would be more feasible to classify the types of markets into the following:

a. local assembly markets

b. producers'-consumers' markets

c. central wholesale markets

d. retail market

Variations in Markets

It is important to know first what would cause variations in the markets, just as well as the determination of market arrangements and their territorial divisions, as these would guide us to a better understanding on the market organization, formation and structure.

If one would trace the progress made in marketing, he would start first on that stage when there was no differentiation between "production" and "marketing". Here, the farmers consumed what they produced. When producers finally found it necessary to sell their own products directly to consumers, differentiation was of little significance as farmers would get the full share of the consumers' money. When there was social growth, when technology and innovations developed, and when farmers and consumers began to draw apart—spatially, differentiation became more significant. In view of these conditions, farmers put more attention to their farm production and to give the marketing aspects to others who shared in the consumers' money. This form of specialization brought about some problems wherein the farmers on the average receive hardly half the consumers' money.

It should be noted though that farmers give the reins of the marketing functions to others only when the size of the farm, the volume of sales, the spatial distance between farm and market, or institutional factors would warrant the separation between farm production and marketing.

There are several factors that determine market arrangements, generally the cost relationships involved in marketing which include:[1]

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[1] Waite and Trelogan, Agricultural Market Prices, (John Wiley & Sons, Inc.), N.Y. 1951.

a. relative costs of transporting farm products,
b. relative costs of processing, and
c. costs of storage.

These three factors determine, too, the production areas for farm products as they exert the comparative advantage of a production area.

As to the territorial division of the markets, they are determined by the:[1]

a. scale or size of production,
b. perishability of the commodity,
c. bulkiness of the commodity,
d. the number of sources of supply, and
e. political factors in connection with local, state or national legislation concerning trade.

These factors also influence transportation costs and exert practical limits of a market area.

Local Assembly Markets

In many countries of Asia and the Far East region, much of the marketing under this type is done on the farm. For instance, country buyers do some "spot purchases". This means that they make a bid for fruits on the trees or for grain during the course of harvest. In some instances, purchases are already made even before harvest time (e.g., when the trees are on the flowering stage).

In a more developed assembly markets, a private firm, a farmer's marketing cooperative or the municipality would provide an enclosed space located close to the point of production where the farmers could display their produce and dispose of them through sale to a local buyer, who assembles the commodities of a number of farmers and at times storing the commodity while purchasing more until the quantity is large enough for economical shipment—maybe to a district or central market.

A typical example of a local assembler which holds true to nearly all countries in this region is the small-town rice miller who buys paddy delivered to it by local farmers and also performs a number of services as selling seed, food, supplies and implements to farmers and also extending them loans.

However, in the case of certain crops for export in some of the exporting countries, the local assembly is almost disappearing. "Merchant truckers" (buyers operating trucks) now go to the farms directly to pick up their purchases on the spot. Purchases made on several farms are at times combined into full car-loads without the benefit of any facilities of the local market assembly.

In the local assembly market, sales take place by public auction or by private negotiations. These are subject to terms and conditions and also rules and regulations to protect the buyers against fraud and to assure payment to the seller prior to leaving the market. The manner of sales in this case, therefore, deserves some consideration as it is important to both seller and buyers.

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[1] Waite and Trelogan, Agricultural Market Prices, (John Wiley & Sons, Inc.), N.Y. 1951.

For purposes of illustration, let us take eggs and poultry in districts of small-scale production that are far from major production centers. In this case, usually the products are brought to the local assembly markets as part of a family expedition. In India, for example, assembly merchants buy large amounts of eggs and poultry at such markets and move them by railway to distant cities. In this particular instance, they have a disadvantage—that of purchasing eggs of uncertain quality in small mixed lots.

On the other hand, in districts of large-scale production, organized auction may take place. Here, usually, e.g., eggs to be offered at auctions and delivered at the auction place are graded by the producer, standardized and placed neatly in containers. These are done to attract higher bids. Regarding live-poultry, they are segregated by type, age and sex and displayed in meshed-wire cages where buyers could see more easily and do their bidding. In both cases, the wholesalers and retailers doing most of the buying at such auction marketing represent the consumers' interest while the auctioneer stands for the producer and is usually given a service fee.

Sale by auction has its advantages over that of sale by private negotiation:[1]

a. the producer is reasonably sure to receive the going marketing price;

b. the producer does not lose much time in selling his produce;

c. the producer does not run financial risk as most auction organization guarantees payment to sellers and that buyers in most cases are asked to pay in cash or to provide guarantees either in cash or in some other form of negotiable instrument before they take personal possession of the products;

d. auction sale would encourage the raising of quality standards in the products offered for sale. In this connection, it would provide better grading, packing and cold storage facilities for the convenience of market users; and

e. buyers and sellers can easily judge whether supply and demand are in balance; hence, getting a clean impression of prices.

However, what should be taken as a safeguard at these markets is the possible presence of collusion between buyers. The possible precautionary measure to do away with this is to attract a number of buyers and to put a display of prices at such markets or other neighboring markets. In this instance, the market should be big enough and that both farmers and wholesale buyers must be well represented.

Producers'-Consumers' Markets

In many towns and villages, farmers still sell direct to consumers and get the full consumers' price for their products. This is done in direct marketing, in producers' market or door-to-door sales. Generally, under this type of market, the quantity offered through sale is small and, perhaps, the time spent is rather long. On the other hand, the farmer is very independent—having the control of the entire market process and does not need intermediary services. A great deal of the producer-consumer markets caters to the marketing of eggs, fruits and vegetables.

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[1] Steward and Abbott, Marketing Eggs and Poultry, (FAO Guide No. 4), Rome: 1961.

Direct marketing. Producers within the reach of the population centers are able, quite often, to dispose of a substantial percentage of their output through direct sale to consumers who go to the farmers to buy. This is called "direct marketing". The consumers in this instance are motivated to go to the farm to make a direct purchase, thinking that the produce will be fresher and the quality better. At the same time, the producer is benefited because he gets a full share of the consumer's money and incurs hardly any direct costs. In this instance, however, there is a need for market news service. Producers may receive low prices when buyers are few. This situation is further aggravated when there is no marketing intelligence at all.

Producers' market. Also, the producer can make direct sale to consumers who could not go to his farm. This is often done, to what we term in here, in a "producers' market". In this case, the producer puts up a stall in a public market place and offers his particular produce through sale. Direct bargaining takes place between producer and consumer.

e.g. This kind of sale in such a market is popular to some extent in countries like India and Nepal. In fact, farm people find it worthwhile although many farmers have only five to six fowls on the average for sale at one time and hand-carry them for long distances. In Madhaya Pradesh, past study showed that 30 per cent of the poultry were sold directly to consumers in this manner.

The disadvantage in the market is that at the end of the day when the producer could not dispose of his remaining stocks, he may cut his prices substantially or else carry his unsold portion of his produce back to the farm.

Door-to-door sales. This system usually holds true to farm produce in small lots where the farmer would carry his goods in a basket and walk along in streets and would go from door-to-door as consumers would summon him. In this particular instance, the relationship between buyer and seller is much the same as at the producers' market.

There are advantages in the producers' and door-to-door selling.

a. facilitates the consumer to determine the desired type and quality preference and willingness to pay for them;

b. the producer receives the full amount of the price paid for his commodity; and

c. the quality is maintained so that the buyer is induced to purchase.

On the other hand, the **disadvantages** of the two are:

a. a great deal of time is spent in the marketing of his produce; and

b. consumers would have less choices to compare at the same time the quality of the products being offered for sale.

Central Wholesale Market

Between the producing and consuming ends of the marketing system are the large central markets where goods from many local assembly markets or district processing points are concentrated for processing or for additional processing, storage, grading, conditioning, and distribution to other processing and secondary wholesale markets or markets for shipment overseas. These central markets are usually found in large cities or at vantage concentrating points which are used in the marketing of foodstuffs (e.g., fruits, vegetables, meat and fish). The main buyers in this market are local retailers and specialized wholesalers. Generally, central wholesale markets are operated by municipal authorities, traders' association or a market corporation under some public supervision.

Since the quality of agricultural commodities varies so much, buyers must know the different characteristics of the particular lot they are buying. This would even be harder as descriptions of some commodities are hard to acquire and samples could hardly be taken, so that in the central wholesale market physical inspection of the individual lot becomes a necessity particularly in livestock, tobacco, fruits and vegetables. However, for the more bulky and less perishable products, sales are done on the basis of description (e.g., potatoes). For non-perishable products that could be sampled (e.g., food grains), they may be sold on the basis of samples. Where products are channelled into distant markets, grade descriptions become important (e.g., export trade in certain commodities, such as wool, hair, bristles in India is done largely on this basis). In view of these complexities involved in central trading, central markets require some physical facilities. For instance, there should be free access of vehicles to and from the wholesalers' premises coupled with ample parking space. Stands (the pavilion type) should be furnished as they have many advantages. Lighting and ventilation should be good. There should also be sorting and packing areas, refrigerated storage for perishable produce, telephone, banking and other services incidental to marketing.

A central wholesale market is the focus of many smaller markets and it is the point of contact with suppliers to important groups of consumers. Hence, a central market is usually the primary price-making mechanism for the production areas it serves. It is generally said that "the most significant price-making point in a particular market is the central wholesale market, or point at which the products are assembled from producing areas in greatest volume before entering the consumer distribution channels".[1] The supply and demand forces thus operating at such a point are more representative of the entire market than at any other intermediate point.

In fact, prices in the central wholesale markets act as an index or as a guide to prices of products in outlying producer markets.

e.g. Grains bought at country elevators in the producing area are usually bought on the basis of reported closing quotations of the central wholesale market to which it is going to be equipped.

In this connection, it should be noted though that the element of competition is the major factor that would determine the degree of price reaction regardless of the price mechanism by which central market prices are transmitted to producers' markets. This means that when country buyers have stronger competition among themselves the central market price changes would likely be reflected more promptly in local markets. In addition, when a district or area produces more than enough of an agricultural produce to supply local demands, buyers would be dependent on central wholesale markets as outlets for sales. On the other hand, large producers as well as small producers acting cooperatively can skip the local market and transport their produce directly to the central wholesale market when competition is insufficient to keep local market prices reasonably close to central market prices. However, there is one problem in this connection, that of accumulating shipments large enough to obtain the economics of scale in transportation.

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[1] Waite and Trelogan, Agricultural Market Prices, (John Wiley & Sons, Inc.), N.Y. 1951, p. 135.

It is the general concensus of opinion that "if a central wholesale market is established, it should be compulsory that all wholesale transactions take place there" in order to effect comparison of prices effectively. Sources elsewhere, however, doubt about this. For example, commission agents or porters can hike up their charges to the detriment of market users. This could be remedied by establishing direct transactions between supplier and retailer. Also, information on prices could be disseminated by a systematic collection service without causing all produce into and out of a particular market.

The locale of a central wholesale market is influenced largely by the characteristics of the product, e.g., bulkiness, perishability, seasonality of production, the standardization of quality and the facility with which the product could be handled. Also, the type of processing which the product needs and the institutional factors influencing the market (such as participation of cooperatives, the degree of monopoly control, and government regulation) must be considered.

Usually, central wholesale markets tend to be situated near the producers when a high degree of percentage of a product comes from a very limited territory relative to the area of distribution. Conversely, central wholesale markets are located in large cities or areas nearer to consumers where the supply of the products comes from widely scattered areas.

In any case, however, wholesale markets must be located in a place where there is adequate transportation, storage, and in some cases, processing facilities. In this connection, the construction of a market should be in an area where possible future expansion could be made. The ample and wide space would also ensure efficiency and cleanliness. According to Dr. J. C. Abbott, Chief of the Marketing Branch at FAO, Rome:

> "In countries where a large number of small buyers and sellers is customary, it is advisable to reserve for a wholesome market an area of about 1,000 square feet per 1,000 inhabitants served".

The site must be within easy access of the retail traders, hence, not too far from the residential quarters. He said that the retailer ought to reach the market within an hour. Also, the site should be within the easy reach of sellers. In this case, the location should be placed where majority of sellers do not have to cross town to reach it. As had been said earlier, the market should be within easy access to road, rail and water transportation if available.

Retail Markets

In most countries of Asia and the Far East, buying power and capital resources are limited, and usually the retail market, especially in rural areas, villages and towns or far-flung areas, is the most usual mode of sale to consumers. In these countries, retail markets usually comprise stalls in which several kinds of products are displayed and sold. Also, there are some itinerant vendors displaying and selling their wares. However, in the more progressive towns and areas where good roads and economical trucking facilities are situated, the small town food retailer is now visited more frequently by salesmen in cars or trucks. These retailers in these progressive towns or in cities have now put up more or less permanent sales and display premises and they now tend to cater to a narrower range of products.

Retail markets could thus be differentiated from direct marketing. In retail markets, the retailer purchases commodities from the producer, wholesaler or other intermediaries for resale to final consumers. On the other hand, in direct marketing, direct transaction takes place between producers and consumers.

Usually, local authorities have a hand in the general supervision of retailers. However, improvements in the retail markets seem necessary; hence, the services of a specialist might be necessary so that he could help in:

a. providing low-cost stall designed to improve hygienic condition and sanitary surroundings, and protecting the goods from damage from weather or from acts of man;

b. establishing satisfactory methods of allocating space and determining changes; and

c. providing price information to consumers if retailers are reluctant to display price labels.

Market Channels[1]

In the course of the previous discussions, one can now picture the flow of goods enroute from the producer to the consumer. This may involve the movement of the goods to intermediaries or direct from producers to consumers. Market channel can thus be defined as "the sequence of intermediaries and markets through which goods pass enroute from producer to consumer".

For purposes of illustrating what a market channel is, Figure I is hereby presented. It shows that of the maize produced in Thailand in 1959 (except the small amount of maize used for planting for the following year) about 46 per cent of the producers' maize was sold directly to local merchants who in turn sold 38 per cent of their purchase directly to maize exporters, 6 per cent to Livestock and Poultry Feeders, and 2 per cent to wholesalers in Bangkok.

Also, about 51 per cent of the total maize growers' output that entered the commercial channel was bought by merchants from other areas, of which 33 per cent was purchased directly from the corn growers, 17 per cent from the farmers' creditors and 1 per cent from the maize shellers. Of the aggregate amount which the merchants from other areas were able to buy, about 47 per cent was sold by them to maize exporters and 4 per cent to feeders. The brokers who were acting as agents of the Bangkok merchants purchased 3 per cent of the remainder from the growers and sold the whole to the Bangkok exporters.

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[1] Source: J. C. Abbot, Marketing Problems and Improvement Programmes, op. cit.

Since only 10 per cent was utilized by local livestock and poultry feeders, the other 90 per cent was channeled to the maize exporters and found their way into foreign trade. Of the 90 per cent that was exported, 1 per cent went to Borneo, 3 per cent to Singapore, 82 per cent to Japan, 3 per cent to Hong Kong and 1 per cent to Malaya. All of these would show the pattern of the flow of maize from the producer in Bangkok to the importer, processor or consumer in other countries of Asia and the Far East.

Marketing Margins[1]

Since the marketing of goods involves also the services of several agencies, remunerations are meted out from the marketing margins. These agencies, once the goods are transferred into their hands through a medium of exchange, actually assume ownership of the product, and later resell them. Some charges are paid to them for their services rendered. Charges could either be a certain percentage of the value of the goods or a flat rate per quantity stored or handled.

Marketing margin, therefore, is defined as "the difference between the price paid to the first seller and that paid by the final buyer".

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[1] Source: J. C. Abbott, Marketing Problems and Improvement Programmes, op. cit.

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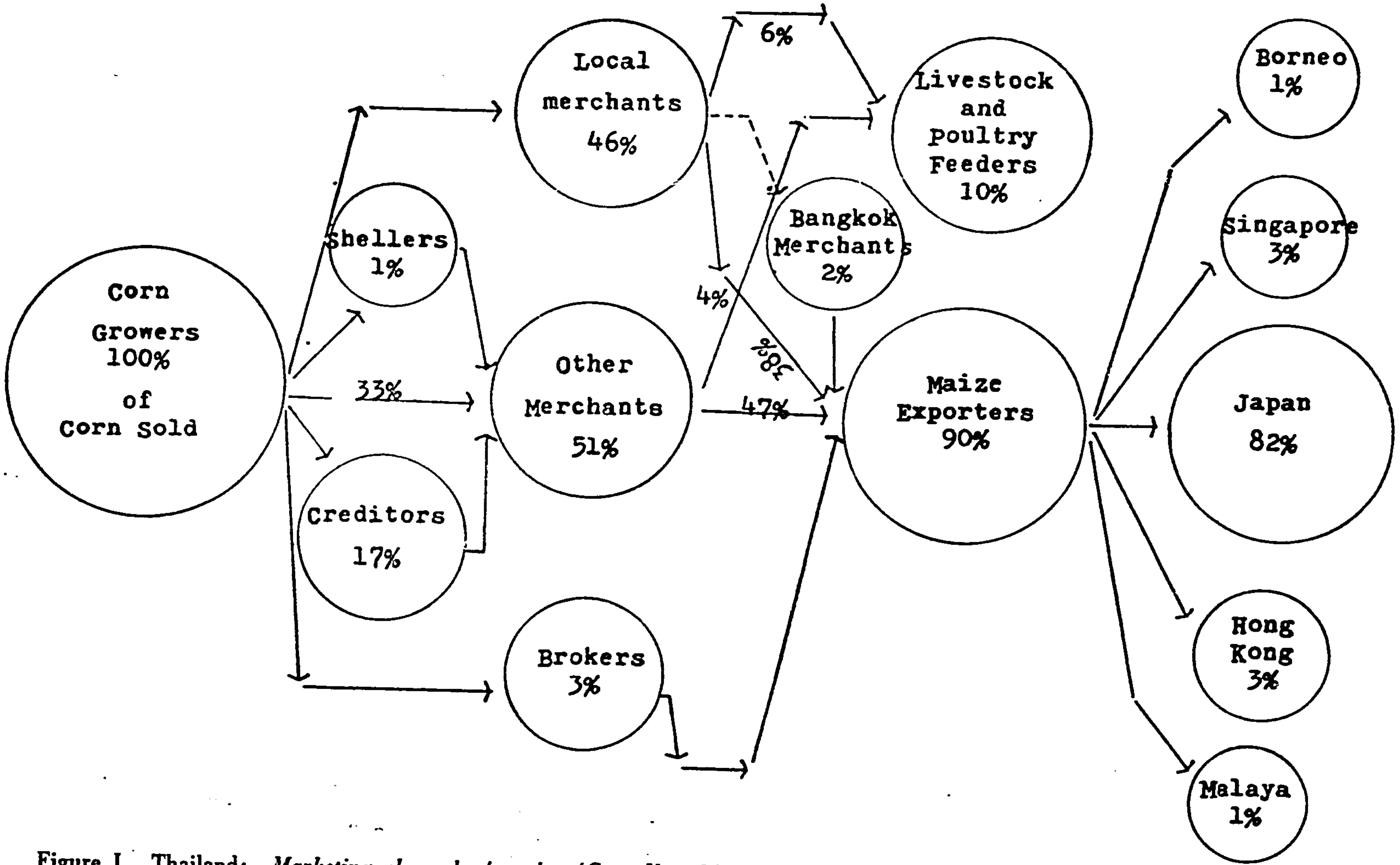

Figure I. Thailand: *Marketing channel of maize* (*Crop Year* 1959).

Source: *Chaiyong Chuchart, Gordon R. Sitton, Arkhom Soothiphan, Production and Marketing Problems Affecting the Expansion of Corn Growing in Thailand,* (*Department of Agricultural Economics, Faculty of Economics and Cooperative Science*), *Kasetsart University, Bangkok, Thailand*: 1962. *November.*

PREPARATION OF AGRICULTURAL PRODUCTS FOR MARKETING WITH PARTICULAR EMPHASIS ON PACKING AND TRANSPORTING

Eugenio V. Mendoza
General Manager
Central Cooperative Exchange, Inc.

It is certainly a pleasure to be with you this morning, and discuss with you a subject of common interest. The subject assigned to me is "Preparation of Agricultural Products for Marketing with Particular Emphasis on Packing and Transporting".

Preparatory Statement

1. Scope of activities or services involved in the preparation of agricultural products for marketing.

As a student of marketing, I wish to stress the fact that there are three common approaches to the study of the subject: there is what is known as the **functional** approach; then we have the **commodity** approach; and lastly, we have what is called the **institutional** approach. As implied in the term **functional** approach, the study is anchored on the different functions of marketing. In case of the **commodity** approach, particular emphasis is placed on the commodity itself, and in the **institutional** approach, the outlook is really on the different institutions involved. In **functional** approach: we usually read that we can classify functions into several kinds; the **exchange** functions which involves selling and buying; the **physical** functions which involves principally storage and transportation; and the **facilitating** functions as standardization, market intelligence and so on.

There is also another way of classifying functions. According to one author, there are actually three principal marketing functions: assembly or assembling, processing, and dispersion. There are also auxiliary services to be performed for the accomplishment of these functions, like grading, standardization, etc. So you will realize that the subject assigned to me is something that touches and radiates on the different functions of marketing.

I will discuss only certain aspects of the so-called auxiliary services. It is just like chopping the subject, and assigning to me two portions thereof—packing and transporting. The matter of quality control, standardization, and storage and all other relevant subjects will be discussed by other lecturers.

2. Central theme of the lecture and mode of development thereof.

In the development of the central theme, I propose to develop the subjects by relating the existing conditions—what we are now involved in, in packing and transporting here in the Philippines, the problems and the possibilities. I think that by discussing and focusing attention on the existing situation, we may be able to have a better exchange of views during the discussion, and in the process we may make use of the presence here of Mr. Shah, Mr. Mittendorf, and Mr. Arzadon in placing their wealth of experience to bear on the local conditions. Separately, these areas of packing and transporting are actually areas that can be called very deficient in the field of agricultural marketing in the Philippines. So the mode of development will be more centered on the practical aspect and if ever I place some strange problems on these areas of packing and transporting, it is not my intention to discourage all of us here nor would I want you to look at this situation as entirely helpless. Actually, if ever I stress on the problems, it is because of my desire to impress upon all of us that there is a big challenge on our hands, and as long as we identify and isolate those problems I believe that we have the situation under control.

Some Basic Background Information

1. Relationship of production and marketing.

I believe that we are all agreed on the point that we can not dissociate or draw a wedge between production and marketing. In fact, it is recognized now that marketing is the best incentive of production. It is not a simple matter of marketing; it is something really directly related to production and, definitely, these two subject matters could not be treated separately.

In fact some authorities said that marketing is a part of production. But regardless of the consensus of whether marketing is really a part of production or not, the point is, whenever we discuss production, it is imperative that we discuss marketing. That places into sharp focus the relationship between production and marketing. Regarding this relationship, I firmly believe that the preparation of agricultural products actually starts in the production of the commodity. We should have a commodity first, but what I am trying to imply is, we should have a good quality product to be marketed, because unless we have a good product, no amount of efficiency in marketing will enable the farmer to derive a good return from his produce. When a product is mediocre, inferior in quality, no matter how efficient the process of marketing is, the product here follows through; the farmer will not be able to get the maximum return for his pursuit. And there are many factors in production practices that actually affect the nature of the product. For example the matter of application of fertilizer.

There are plants that if you put an excessive amount of fertilizer, the storage quality is affected. So right then and there, beginning with the production aspect you will know the quality of the product that you have. Seed selection is another practice that is relevant to the quality of the product that you market. A good example in seed selection and a very practical example is the way they plant rice in the Cagayan Valley. We can mention specifically Isabela, Cagayan, where they don't actually practice much use of this so-called seed selection. They simply plant the rice regardless of the variety. There are, of course, isolated cases, and what happens during the marketing period? All the product in that province are treated as if they belong to one grade or one variety even if the seed planted happens to have the dominance of the high or better variety. In disposing of the product, the farmers received the same price regardless of the variety produced. In other words, there is a uniform price for all the palay or rice produced in the area. That probably accentuates the need for the adoption of the practice of seed selection.

Mr. Guzman, who happens to come from Isabela, can bear me out that in that area, middlemen usually have their holiday during harvest season because those who are quite familiar with the trade usually buy the better quality at a price equal to the lowest variety produced in the area. Actually, the middlemen, mostly aliens, make the most out of the situation.

Another cultural practice that has a bearing on marketing is the time of harvest. Some produce are harvested way beyond maturity and some are harvested even before maturity. Of course, when it comes to marketing, the matter of time of harvest is of particular relevance on the storage quality of the commodity. There are, however, commodities or agricultural products which should be harvested when they are not yet ripe. Banana is an example. It is harvested at an earlier period to give allowance for the storage in transit, such time that when they reach the actual market they will be ripe enough to command a good price. Incidentally, banana, which is a good export crop now, is actually attracting much attention. Unfortunately, it seems as if we haven't discovered yet the right formula of storage so that these bananas will reach Japan, the best importing country, in such a manner that they will just be about ripe.

2. Some peculiar characteristics of agricultural products.

I want to touch now the peculiar characteristics of agricultural products with the hope that they may serve as a sort of guide in our discussion of the different processess of marketing, especially packing and transporting. One peculiar characteristics of agricultural products is that they are produced from relatively small-sized farms. In other words, the production units are usually small so that when you have a small output, naturally, the marketing process becomes very difficult. When you have a small volume, the unit cost of marketing becomes definitely high and that is one characteristics of agricultural products here; they come from small production units; so you need to assemble a product from so many number of units in order to have the necessary volume to make its marketing less costly.

Another characteristics, and this has a bearing on the physical feature of our agricultural product, is that most of our agricultural products are perishable and that brings up the problem now of storage transporting. When you have a perishable product, unless you subject such a product into some sort of processing if they are to be marketed in the form that they left the farm, naturally, you have a big problem — transporting.

Another characteristics of agricultural products is that they are very seasonal. There is usually a peak load and in marketing this is one pressing problem. As much as possible, there must be a steady supply of agricultural products in the market to stabilize the price.

Another characteristics that can be mentioned is the fact that, in just a few cases, it could be said that most agricultural products are consumed not in the form that they left the farm. They undergo some sort of changes or processing before they reach the consumer. This is because of the fact that with the possible exception of fruits and vegetables, agricultural products are actually raw materials. They are utilized for other purposes not in the form they actually leave the farm. We have crops that are seasonal in nature, perishable, and we can add the fact that agricultural products are bulky. When we try to consider all these things, we will realize and better appreciate the complexities of the marketing problems.

Packing Agricultural Products in the Philippines

1. Existing practices and problems.

Packing as is well known by all, is a function that is intended for a number of purposes. For example, through packing we are enabled to protect an agricultural product from physical damage; bulky products like cotton are much reduced in size, compressed and handy. When you pack them you actually compress the bulky products into small units. These can be handled more efficiently. For further illustration, small tomatoes or potatoes, when packed in crates can be handled more efficiently. Also, packing is a device or a process by which the loss in weight may be reduced, or the quality of the product may be preserved or maintained.

At this point, I want to touch on one vital aspect when it comes to packing, especially with relevance to rice or palay or paddy. The common container for palay or rice, here in the Philippines, is jute and the situation is that we import a great quantity of these jute sacks although we have four jute sack manufacturing plants in the Philippines. Still we import substantial quantity of jute sacks to serve as containers not only for rice but for copra, and other agricultural products. The figures of the Central Bank show that from the period 1958-1963, the Philippines imported about 56 million pieces of jute sacks, or we can say 9 million pieces of jute sacks a year. This one is really a big industry. assuming that the average cost is one peso, but every year we are importing say 9 million-peso worth of jute sacks. This is a very substantial figure, not to mention that the importations made are needed by other sectors like the sugar sector. And figures further show that we need about 20 million pieces of brand new sacks every year. This is a very conservative estimate.

Let us assume that the production of palay in the Philippines is around 90 million cavans and that we will use the sacks three times and we assume that 90 per cent of the harvest would be placed in sacks, so that means about 81 million. Inasmuch as the usual practice is to use the sacks at least three times, we may assume that we will need about 33 per cent of 81 million of fresh supply of sacks every year. But as I said, the problem is we are not manufacturing enough here in the Philippines. Considering that rice or palay is the major crop here in the Philippines, when it comes to packing, I believe that area should attract our attention. I was thinking that we should look into the possibility of finding a substitute material. We have many available fiber crops here in the Philippines and considering the magnitude of the demand for the product of the container, I thought that probably we can project our thinking on possibilities along that line. As I said, the problem in this jute sack situation is that manufacturing plants here are not in a position to supply the demand. Thus we have to import jute sacks.

In the case of fruits and vegetables, we are all aware of the fact that we have a very simple way of packing these items. Vegetables for example, say cabbage, lettuce, coming from the Mountain Province, are shipped in baskets — in bamboo slats, made into baskets or they are sometimes placed in sacks. In the case of tomatoes, they are placed in baskets which are usually covered with banana leaves. In the case of potatoes, there are some who place them in wooden crates and also there are some that put them in onion bags. There seems to be a lack of a more systematic, a more realistic, a more practical way of packing fruits and vegetables here in the Philippines. As to other commodities, we see the same pattern. In fact, most often, especially fruits and vegetables coming from the nearby area of Cavite, you don't usually find them placed even in boxes. You see piles of papaya on the roof of trucks exposed to the weather. The situation in corn is much better in the sense that corn has its own natural protective covering, but in the case of many of the perishable crops the pattern practically follows one that is probably not the right type of packing them for the market.

2. Possibilities

Regarding the possible substitute for jute sacks, we have a number of fiber crops here in the Philippines which, if properly-tested for the purpose, can be a good substitute. There is a possibility of growing jute here in our country. But the actual cost of producing the bag from any raw material that may be produced here may be more, than if we imported the commodity, so it seems that this is something that needs further study and consideration.

I remember a factory was put up in Muntinlupa known as Ducon or Dupont that contemplated to manufacture boxes for palay, using abaca refuse. However, after a series of tests, it has been found that abaca refuse in its pure form when manufactured into sack is quite rough and heavy so that it will not serve the purpose because the practice here in the Philippines, especially in the handling of rice or palay, is for the laborers to carry the sacks on their shoulders. But for practical purposes, they have to continue the manufacture of this sack, but I understand that what they are doing now is to mix some cotton with the abaca refuse, with a view to make the product smooth.

Another fiber that we can use, and those of you who are from Mindanao would probably better realize it, is a grass known locally as "balangot", good for tying and for making mats. I was just thinking that it has also a possibility as a container for palay or rice. And we can mention a long list: ramie, kenaf, even buri, the ones that are made into mats. Those are the existing possibilities, but the key to all of these is that there must be an extensive research as to the adaption of these fibers as containers. We cannot expect Farmer A, Farmer B, and Farmer C on his own to conduct or to test, whether these materials can be used or can be manufactured into sacks. The whole situation underlies the fact that there must be an extensive research work to see the possibility of utilizing local products for the purpose. This is an expensive preposition, so that unless sufficient aid is channeled to such a research undertaking, I am afraid that despite the abundance of possible substitutes for jute sack, they will only remain as possibilities, they will never become a reality.

The same possibilities exist for research work in improving the packing materials especially for fruits and vegetables. I hope that the Department of Agricultural Economics of the College of Agriculture of the University of the Philippines, or some other government agencies, will initiate research work in packing, not only on the area of a possible substitute, but also on the best way to pack agricultural products in the Philippines. We have our own peculiarities, and definitely packing is an area of marketing which is to be done more or less on a scientific basis

Transporting Agricultural Products in the Philippines

1. Existing practices and problems.

Transporting agricultural products just like packing, is another major marketing problem in the Philippines. There are some who claim that if we can only distribute the rice surplus of an area to the deficit areas at the right time, probably there may not be any need for us to import the commodity. Geographically, transporting agricultural products here in the Philippines is a natural problem because we are composed of so many islands and markets are located in scattered areas. Products, for example, which can be produced in Mindanao cannot find their way to Manila, the central area of consumption, because of the problem of transportation. And that is even going to the extreme — Mindanao to Luzon. Even the matter of bringing or transporting agricultural products from Mindanao to Visayas is a problem by itself; from Iloilo to Cebu is a bigger problem. This is because of the fact that there is only one mode of transportation there — water — and it seems that there is no boat going from Iloilo to Cebu. It is even cheaper sometimes to ship the agricultural produce from Iloilo to Manila than from Cebu to Iloilo. These are real problems of transportation here in the Philippines. This is true also, with the other means of transportation, say rail, truck, or by air. At most here in Luzon, we can rely only on trucks. With the condition of our railway, we cannot possibly rely on the rail as a mode of transporting products, especially for perishable products, when time is of the essence, it is usually the truck which we use and there is no alternative. This is the regretful and pathetic part of it and when you add the fact that most of our roads are not conducive to good travel, well, you have really a very complex problem of transporting here in the Philippines.

2. Possibilities.

The matter of bringing the commodity of the agricultural produce from the farm to the town is a problem by itself. A distance of 1 or 2 kilometers takes about 1 or 2 hours before the commodity reaches the town. Another problem occurs when transporting goods from the town to the central place of consumption. Probably, as I have said, we can generate some thinking along that line. I hope that through our cohesive and united efforts we may be able to do something. Practically, all of us come from different offices and I am sure that inasmuch as the problem of marketing cannot be considered merely as a concern of just one agency, the solution to the problems of marketing demands the collective thinking and efforts of all of us here.

Summary and Conclusion

It seems to me that the preparation of agricultural products really start from the production of the commodities itself so that there should exist a close tie-up between production and marketing. In fact, there may be occasions, my friends, when the matter of programming the planting of a crop is a big help in marketing to avoid possible market gluts and it is possible too, that thru mutual arrangement between the agencies engaged in marketing and those in production, we may be able to program the planting, to some extent, of a particular commodity. As a result there will be a steady flow of produce in the market. This is applicable in some crops and I wish that a study along that line could be made, for example, for potatoes and onions. As it is, we have only one refrigeration facility at the disposal of onion growers in the Philippines. This is in Malabon, the so-called Nogrocoma refrigeration plant. It can take care of probably 20-30 per cent of our total production. What I am trying to impress upon you is that the producers and marketing agencies should coordinate if ever we want the problems on both sides to be solved in a more efficient and realistic manner.

Regarding the matter of packing, I believe improvement lies in finding a substitute for the containers that we are using now. This is an undertaking that can not be done by just one or two agencies. We have to solicit the mutual assistance of all agencies to work on these activities that are related to both production and marketing.

Insofar as transportation is concerned, I focus the discussion on the fact that transporting is really a natural problem in the Philippines. At present, we do not have much room for improvement. In Luzon, for example, it seems that we can not rely too much on rail transportation but on trucks.

With the above discussion, I hope I have aroused your interest to the various problems that exist regarding the marketing of our agricultural products. I hope we may be able to avail ourselves of the assistance of the FAO experts who are benevolent enough to be with us. Thank you very much.

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MARKET INTELLIGENCE AND STATISTICS

F. A. Shah
FAO Regional Marketing Specialist
Asia and the Far East

Definition of Market Intelligence

Market intelligence, market news or market information service may be defined as the collection, compilation and analysis and dissemination of facts and interpretation of facts likely to help farmers, traders and consumers in making decisions. Such information includes the character and volume of supply of a commodity, its location and probable movement, the expected level of consumer demand and the wholesale demands based on it at each exchange point. It covers current price quotations, the "feel" of the market, trade opinion as to future trends and the probable effect of seasonal and climatic influences, and forecasts of future production, consumption and trade movements and seasonal variations in yields and their probable impact on prices — all material likely to influence the terms of exchange.

The Role of Market Intelligence in the Agricultural Economy of a Country

1. **Market information and the producer.** Market information is essential for producers, traders, and consumers if market mechanisms are to work efficiently. Farmers as producers of farm products need information to assist them in planning their farm operations from the time they plant or seed until their produce has passed out of their hands on the market. They look for guidance as to when, where, how and to whom their produce can be sold to the best advantage. They want to be able to check the prices offered by various forms of marketing and by alternative outlets in each. Even where farmers are unable to change the time of selling their products because of production and ripening restrictions, and when they are unable to shift easily into alternative forms of production, they may still benefit indirectly by general access to pertinent marketing information. The knowledge that a farmer can compare the prices he receives from one trader with those paid by other traders influences country buyers in offering fair and good prices on advantageous terms and conditions.

2. **Market information and the wholesaler.** Access to better and pertinent marketing information enables wholesalers to reduce their business risk and to operate profitably on lower margins with resultant benefits to producers and consumers. On the contrary, when up-to-date accurate information is lacking, local buyers seek wider margins as a hedge against price changes in distant markets which they may not know about. In case of perishables, fruits and vegetables, for example, inadequate market information is a frequent cause of physical waste and loss. Furthermore, in the absence of current market news, produce from distant points may be loaded on to an already satiated market, to be sold at distress prices or moved elsewhere with considerable cost or loss. On the other hand, an unnecessary shortage of supplies may force consumers to pay high prices in other districts.

3. **Market information and the transport and storage agencies.**

Transport and storage agencies of farm products also depend greatly on advance information of market in planning their operational schedules to meet seasonal agricultural requirements and everyday management decision-making. It is, however, a common experience in the region that shortage of railway wagons occurs during harvest season.

4. **Market information and the consumer.** Similarly, consumers can buy in the most advantageous markets if price and quality information is conveniently available to them, especially for produce with limited seasons. The so-called consumer education problem is directly connected with the availability or pertinent and timely information on market commodities including farm products.

5. **Market information and national governments.** Not infrequently government are handicapped in carrying out important national agricultural policies and programs because of the paucity and the inaccuracy of their statistics on production, consumption and stocks. For an effective administration of farm price stabilization and support programs, which as in force in many countries in the region, accurate estimates for forthcoming production, stocks, carry-overs and internal movements are essential.

This type of information is especially important in countries where the government is responsible for meeting marginal deficits such as Ceylon, Malaysia and Indonesia or facilitating the disposal of surplus farm commodities as for instance, Burma and Thailand. In some cases, for example, excessive supplies have been imported because the full content . domestic stocks held privately was not known, and exports have been made from countries which subsequently had to import supplies to meet a marginal deficit.

Classification of Marketing News

The marketing information needed to meet the various demands broadly falls under two main categories: one is in terms of time-spanning of information and the other is in terms of geographical area. The former comprises short-run market information and long-run market information; the latter consists of local market information, national market information and international market information.

1. **Short-run and current market information.** This information includes the reporting of day-to-day prices and commodity movements as a guide to current transactions. Usually, it must be obtained by direct investigation in strategic markets in the immediate vicinity of the areas and groups it is intended to serve. The chief requirement is accuracy and rapidity in collection and dissemination.

2. **Long-run and basic market information.** It comprises basic production and consumption statistics for the various farm commodities traded in a country, and data relating to the broad movement of trade, long-run trends and factors bearing on future prices, such as areas seeded to particular crops and expected yields. Accordingly, the so-called "Crop Estimates" and "Farm Outlook" fall under this information category in addition to the actual basic production and consumption statistics.

The short-run and current market information, however, does not provide farmers with all the necessary information to help them in planning annual production and operation schedules: it just serves the farmers as a guide in current transactions for what they have produced, upon which, however, they cannot base their annual planning. The fact justifies the establishment of "Farm Outlook" by which basic supply and demand information of major farm commodities are collected and interpreted and disseminated.

In the United States, for example, the Department of Agriculture is responsible for publishing "Farm Outlook" reports. In the case of annual "Farm Outlook", for instance, a spring edition is primarily emphasized on production planning aspects, and with special reference to the marketing aspects, as autumn edition is prepared and disseminated. Specifically, some periodic reports are available, e.g., Demand and Price Situation; Commodity Situation Report; Farm Income Situation; and Marketing and Transportation Situation.

To make estimates of prospective or forthcoming crop estimates is conducted through investigating acreage cultivated and crop conditions. The information serves farmers as a guide in marketing of what they have produced in a particular year: How and to whom will be major problems to be tackled by the farmers with this information.

3. **Local market information.** If there is little likelihood of obtaining timely and adequate information on a national or international level, it is still worthwhile furnishing a review of supplies and price developments on the local market. Generally, the management of the wholesale market can publish full information on supplies received up to the time the market operations start, and summarize the price trends of the previous day on notice boards, as done in regulated markets in India and Pakistan, or on duplicated sheets for general distribution. However, possibilities of influencing supply with the help of local market news service are generally limited.

4. **National market information.** This service can publish the local data supplied by the various wholesale markets about the country, details of the supplies offered at farmers' assembly markets and reports on the general crop condition and on trends in reports and exports. Eventually, when the information service is well established and operating, produce from the growing or producing centers will under normal conditions flow to the places where it is most needed. In this way, under-supplied markets and the excessive prices and profits resulting therefrom, and on the other hand, over-supplied market with distress prices may be to a larger extent avoided. National marketing information can further be divided into provincial or state information.

5. **International market information.** If a country is much affected by international trade movements either because its wholesale markets draw on considerable quantities of imported produce, or because a substantial proportion of the produce sold on its farmers' assembly markets goes for export, then the establishment of an international market news service can help serve to avoid severe gluts and shortages. It is, however, very difficult to organize such a service in a satisfactory way, and existing services conse-

quently often leave much to be desired and improved. In this connection, the Food and Agriculture Organization of the United Nations is rendering and encouraging contribution to some extent by publishing several kinds of regular reports on farm commodities around the world. Individual countries also are trying to get pertinent information on international level.

International marketing information can further be grouped under regional information, e.g., Asia and the Far East. It can be of great benefit to the countries concerned in their production and marketing programs. You will perhaps be interested to know that in the 1962 FAO Near East Regional Conference the representatives of the member governments showed keen interest in this type of information and consequently passed a resolution requesting the Director General of the FAO to organize a regional market news service from its regional office at Cairo, U. A. R.

Collection and Dissemination Agencies

In order to get the job done in the field of agricultural marketing news service, two technical requirements must be satisfied: one is the collection of necessary information relating to agricultural marketing as "contents" or "materials" of the service; the other is the dissemination of the information collected to be made actually available to those for whom the service is existing.

The information collected goes through some kind of processing before it is disseminated widely, and in many instances, it is interpreted, too.

The agencies or organizations for collection and dissemination of the market information can be grouped into two categories: one is private agencies and the other is public agencies.

1. Private agencies

a. **Individual firms.** The first kind of information collection and dissemination agencies classified as private ones constitutes individual firms engaged in or connected with agricultural marketing. They collect information as pertinent to their own exclusive purpose formally and informally. For example, large food companies do with the purpose of determining WHAT, HOW MUCH, and TO WHOM of their own products, and of exploring and developing potential market outlets and expanding the present ones already developed.

In this connection, however, information collection and use by respective individual firms cannot but be limited exclusively to the very individual firms: the information is hardly available to other concerned.

b. **Trade organization.** This service is often undertaken by trade organizations participated by individual firms in different industries to share the common interest in many respects with relation to the collection and use of the market information.

c. **Mass communication media.** The agencies in this category include newspapers — daily, weekly — radios, and televisions, the first two of which, i.e., newspapers and radio, are considered most effective. Newspapers specialized in economic matters are, of course, carrying far more detailed information compared with ordinary ones. But ordinary newspapers render a considerable contribution, too, by including a commercial section. In the developing countries with a large number of small farms and a low level of literacy, the use of radio for disseminating market news is considered more effective. The radio stations broadcast regularly news on marketing in general and with special references to agricultural ones. Here the main problem is that of the provision of cheap community radio sets.

d. **Producers' organizations — farmers' co-operatives.** Farm producers' organizations such as farmers associations and agricultural co-operatives collect market information for their own and for their members' use, e.g., farmers associations in China, Taiwan.

e. **Firms specialized in the service.** In countries with advanced economies such as the United States, there are some private firms specialized in collecting and interpreting the pertinent information for their customers. The Trans-Lux Produce Corporation with headquarters in New York is an example of such specialized firms in fruits and vegetables.

Even in the United States, market information collection and use by private agencies is very limited. Or rather it is based on the information made available by public agencies, though private agencies have some unique features in the service management. In other words, as far as market information collection and dissemination is concerned, it may be concluded that the public agencies' role is the primary one.

2. Public agencies

Importance of the public agencies in the services. Compared with the service by private agencies as discussed, the one by public agencies has considerable advantages: it covers as extensively as possible in terms of information coverage, and it is wide open to whoever needs the information in terms of information availability.

Public agencies have become involved in the services mainly because of the necessity increasingly recognized that the seller or producers of farm products need to be as equally well-informed as the buyer. For this, as many other agricultural matters, public agencies have become to play a significant role in most countries including those with advanced economies.

Means and Methods of Disseminating Market Information

The market information collected must be as rapidly as possible disseminated to those who need it most, namely farm producers, traders and processors. Accuracy of the information is, of course, very important.

Generally, the so-called short-run market information needs to be disseminated far much rapidly than the long-term one, and it is especially true when produce is harvested and marketed in great quantities during the season.

It is made possible for the market information collected to be disseminated rapidly with the rapid development of modern communication means and methods. As a matter of fact, there are employed various kinds of dissemination means and methods for the agricultural marketing service, which are briefly examined as follows:

1. **Net-work of tele-typewriters.** In countries with advanced economies, the network of tele-typewriters covers all of the market news offices throughout the country.

2. **Radios and televisions.** The radios have much to do for the development of market information service in most countries especially in less-developed ones, and they are considered the most influencing medium through which information is disseminated to producers, traders and processors of farm products.

In India, Pakistan and Korea for example, the government supported broadcasting stations, covering almost the entire countries, broadcast regularly marketing information. The information on the air is naturally very simple and, limited to price quotations in a few major cities for general and agricultural commodities in terms of daily necessities.

In addition to the above-mentioned regular program of price quotations, there are some kinds of marketing information on the air in such broadcasting programs as "Morning in Agricultural and Fishery Villages" and "Rural Programs", designated especially for rural populace.

3. **Telegrams, telephones and mailing.** In some countries like the United States, there is developed a system of telegram contract with telegram companies by individuals and agencies who want to get marketing information of farm commodities selected in other major markets. In other words, the telegram company in contract can get necessary information from market news offices to pass on to customers. Meanwhile, market news offices themselves also pass market information to contracted customers in remote areas.

When asked information over the telephone, market news offices are usually responding whenever there are no inconveniences on the part of the offices. By means of mailing, the market news office also provides necessary market information to those who need it on request free of charge.

There are several forms of market news available through mailing: daily, weekly, monthly, semi-annual ones. It is imaginable that market information through mailing reaches customers somehow less rapidly than the one over the radio. However, it usually covers more detailed information in more perfect forms than the latter, and it can also be kept as permanent reliable references.

4. **The billboard.** Marketing information on local markets can be publicized by means of billboards or notice boards usually set up in such places as regulated market yards, livestock yards, cotton shipping centers, loading and forwarding warehouses, tobacco warehouses, post offices, general stores and banking office buildings where people gather or pass by heavily.

5. **Newspapers.** Another information dissemination medium is newspapers. As briefly mentioned earlier of the strategically important role in today's marketing information dissemination, it is considered a second most effective means of dissemination. In India and Pakistan, for example, newspapers of various forms and types usually carry the information made available from markets and marketing organizations.

Along with radios, the newspaper may play a significantly important role in disseminating market information especially in such countries in the region where the service is in its infant stage of development.

Existing Market News Services in the Region

The collection and dissemination of market information has received a good deal of attention in a number of countries of the region as a result of the establishment of the government marketing services and in connection with the introduction of supply and price stabilization measures. Here I would like to mention briefly the type of work which is being done in some countries of the region. In Burma, for instance, the collection and dissemination of statistics of wholesale prices of agricultural commodities, imports and exports constitute one of the main activities of the Marketing Division in the Agricultural Department. In Ceylon, the Department for the Development of Marketing in the Ministry of Agriculture is responsible for the regular broadcasting of prices of vegetables, fruits and sometimes eggs. A monthly bulletin including the prices of fruit, vegetables, etc. is also published in addition to the independent market reports, prices, etc. published by the local newspaper. Similarly, in Japan, the Enterprise and Marketing Section of the Agriculture and Forestry Economic Bureau collects and disseminates daily and weekly news about arrivals, dispatches, prices and market situation for fresh fruits and vegetables at the leading central wholesale markets. Weekly news concerning overseas markets are also collected and disseminated by the Bureau. The Food Agency, another government organization also provides market news service in respect of food-grains for the benefit of producers and consumers. "Agricultural Outlook", for instance, is published twice a year. In addition, about 155 periodicals and business reports are issued. In Pakistan, prices and other market information are collected and disseminated by the central and provincial marketing departments. A monthly bulletin, "Markets & Prices" is prepared and published by the central department which includes forecasts of acreage and production, market reviews, prices and arrivals of important agricultural and livestock products at certain markets. Wholesale and retail prices of important commodities are daily broadcast over the radio stations.

In China-Taiwan three organizations, viz., the Taiwan Provincial Farmers' Association, the Taiwan Supply Bureau and the Taiwan Provincial Food Bureau are responsible for the collection and dissemination of market information. The first mentioned is concerned with the collection and analysis of wholesale prices of fruits and vegetables in principal market and the prices of hogs in rural areas and principal livestock markets. The Supply Bureau is concerned with the collection and dissemination of market news about jute, and the Provincial Food Bureau with that of foodgrains.

In India, the Directorate of Economics and Statistics in the Ministry of Food and Agriculture maintains a price intelligence division whose main functions consist of market news service and the collection and analysis of marketing intelligence. The market news service includes daily broadcast of market prices, arrivals, dispatches, etc. and weekly broadcast of market review through regional radio stations, issue of periodical market news bulletin to rural institutions for further dissemination to farmers and putting up market information on notice boards fixed up in the markets. Marketing intelligence includes establishment in different markets of technical reporting agencies conversant with day-to-day market conditions, for collection, on regular basis, of reliable information on prices, market arrivals, sales, stocks, factors influencing market behaviour, etc. Supervisory agencies are established to inspect the work of reporting agencies and to provide on-the-spot guidance and training in collecting reliable market intelligence. It also includes dissemination of market intelligence through periodical bulletins and its analysis for assisting the formulation and review of price policy.

In order to carry out its normal functions of stabilization of prices of paddy, rice and corn, the Rice and Corn Administration of the Philippines collects data on the prices of rice and corn and the supply and demand situations in various provinces. Similarly, the Philippine Coconut Administration is concerned with the collection and dissemination of daily prices of copra and coconut oil. Periodical reports are also prepared on prices and trade in these commodities in the Philippines and the importing countries. The Market Division of the Bureau of Commerce is responsible for the market news service including that for agricultural commodities. It is encouraging to note that the Government of the Philippines has recently enacted legislation authorizing the establishment of the Office of Agricultural Marketing News Service under the control and general supervision of the Bureau of Agricultural Economics. The main objectives of this measure include, (a) the promotion of orderly marketing, stabilization of prices and minimizing waste, (b) the provision of systematic informational means and basis for the development of a strong bargaining power among farmers, (c) the diffusion of economic education among the farmers and (d) the possible reduction of monopolistic practice in trade.

In Thailand, the collection and dissemination of prices is the function of the Division of Trade Information in the Department of Commercial Intelligence, Ministry of Economic Affairs. It includes daily broadcast of prices over the local radio station. The Marketing Division in the Department of Domestic Trade in the same ministry collects prices from the vegetable and egg markets under its own supervision and put up the same on the notice boards in these markets and make them available to other departments concerned.

Market News Problems

There appears to be a general recognition of the importance of market information to an orderly and efficient marketing system and to the successful introduction and implementation of supply and price stabilization measures. The quality of the information now available, the coverage and the methodology of information collection and dissemination in a number of countries, however, leave much to be desired. The problems involved may be grouped under four headings: (a) extension of coverage, (b) keeping abreast with changing conditions, (c) methology of information collection, and (d) dissemination problems.

1. **Extension of coverage.** More specific as against general type of information is needed. With the wide range of qualities that are involved, prices, supply and demand information will have its maximum use only if it is related to specific varieties and grades. Since many agricultural products have several uses or optional uses, information needs to be specific as to uses. For example, price quotations for the fruit which is to be used fresh cannot be interchanged with those quotations for the fruit which is to be used for processing. Furthermore, there is a need for additional regional or local data.

2. **Keeping abreast with changing conditions.** In a dynamic economy as in many countries of the region, the methods and channels of agricultural marketing are continuously changing which in return justifies that market information service once adequate may not meet the requirements of a new situation. This is the so-called adjustment or adaptation needs and problems.

Generally, in many countries of today, some problems of adjustment or adaptation in terms of marketing information service are increasingly recognized as a result of: (1) the decentralization of the marketing processes, (2) changes in the transportation pattern, and (3) marked changes in the amount and type of processing of agricultural products.

In certain countries, there is a steady change in food consumption pattern which is being reflected on the diversified development of processing industries. Accordingly, we need to pay attention more to the processing sector of farm products which did not receive much attention in the past in terms of marketing information service.

3. **Methodology of information collection.** There is also a need for more accurate coverage, and the questions of accuracy arise with regularity. If the methods of information collection employed are not pertinent and scientific, then it is pretty evident that less accurate information will be collected for dissemination. We have been experiencing many a case with less accurate and reliable information on agricultural and economic statistics improperly collected in a number of countries in the region.

In this connection, however, we see an encouraging effort being rendered by the government authorities in certain countries in co operation with foreign advisory groups for the improvement and development of agricultural statistics with special emphasis on yield estimates and consumption level estimates of farm products. When such a basic problem of information collection is improved, we can go forward with more detailed and specific problems of marketing information collection.

In the case of trying to introduce more kinds of improvement and development programs with respect to market information collection methods, the following should be kept in mind: (1) availability of well-trained personnel who are to plan technically the needed improvements, and (2) financial support as necessary for collection method improvement either for experiments or for actual implementation.

4. **Information dissemination problems.** As pointed out in the discussion of usable information, time factor is of great importance in this

respect. As a result of the rapid development of modern communications, the demand for speed has increased, and, also met satisfactorily to some extent. In this connection, however, it is to be desired that information relating to agricultural marketing is disseminated by means of radio broadcast and through newspapers.

Generally, daily or short-term information needs to be disseminated more rapidly than the one of long-term or basic nature. In other words, the basic or long-term information is desirably to be disseminated to those who need it by mail on free-of-charge basis as practised in some countries.

Some of the technical matters which need to be considered in information dissemination are: (1) to see uniform terminology adopted, and (2) to take into consideration of the service clientele for whom the service is intended to exist. When the information is to be made available to farmers as producers of farm products, for example, we must take account of their general level of educational attainment. In other words, the information should be so transformed as to be understood easily by the farmers. Here we can recognize the possible close relationship between the information dissemination and the government supported agencies for farmers' guidance.

An educational program for the users of the information is also needed. Only in this way will data to be used for the purpose for which they were intended. This users' educational program is very closely associated with the so-called agricultural marketing extension service.

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GRADES, STANDARDS AND QUALITY CONTROL IN THE PHILIPPINES

Remedios E. Racela
Officer Incharge
Bureau of Standards

Grades, standards and quality control, taken together means standardization or classification techniques used by nature in the grouping of things since creation, until men learned to use them to adjust themselves to their ever changing environment and rapidly increasing necessities of life. Roughly illustrated, we have the animals and plants; the terrestials and aquatics; the carnivorous and herbivorous, etc.

Standardization, often spoken of as the gauge of economic progress, has become a necessity in the adjustment of difrerences in the economic set-up of the nation. The economic development of a nation depends upon how fast it can adjust itself to fast-changing conditions to meet the demands of the trade. Among the factors of trade that are subject to such changes are standards of production and of demand for the quality of the finished products. Countries wishing to embark upon, and those already on their way towards, industrialization, generally recognize the importance of standardization as a means of improving the quality of their products. Indeed, the task of establishing standards is easier at the early stage of industrial development than at the later stage when difficulties caused by overlapping practices have to be disentangled and vested interests overcome.

In the Philippines, records show that grades, standards and quality control was first initiated by virtue of the provisions of Executive Order No. 21, issued in 1916. The scope of the Order, however, was limited to only a few products which the government needed for its own use. A more determined approach to standardization was initiated in the Bureau of Commerce after the issuance of Executive Order No. 94, in 1947, creating the Division of Standards under the Bureau of Commerce, with the duty to set and establish quality standards but only for commodities intended for export, and to inspect and certify as to their standards before loading them. Several offices and/or divisions of already existing offices were later organized to specialize in the standardization of Philippine commodities. Among those offices created are: the Philippine Coconut Administration which is charged with the standardization of copra; the Bureau of Fiber Inspection Service, charged with the standardization of fibers; the Division of Specification and Inspection under the Bureau of Supply Coordination, to set specifications for supplies and equipment needed by the government; the Philippine Virginia Tobacco Administration, charged with the duty to set standards for Virginia leaf tobacco; the Native Tobacco Classification Council which is charged with the setting of standards for Native tobacco leaves; Executive Order No. 221, series of 1949, authorizing the Bureau of Forestry to set specifications for timber and lumber; the National Cottage Industries Development Authority, to set standards for cottage industries products; and so forth. You will note that practically all of these new creations after the creation of the Division of Standards are for agricultural products.

Grades, standards and quality control are not taught in school, and if ever mentioned in a course in marketing, it may only be accidental and never taken seriously by the students. Standardization, as we all know, is a continuing process, not an end in itself; its purpose is to describe the object to be standardized, to the end that uniformity and coordination and their attendant advantages, may be attained. Nor is standardization ordinarily permanent or final; it must be flexible enough to take advantage of improvements in manufacturing practices, new materials, or other changes in the industrial picture.

I am very much inspired to discuss the subject before this distinguished group of industrialists and economic experts, for it has recently become the guide-post and password for better quality products. Advertisements in the television, radio and newspapers to describe a product carry invariably the words "quality guaranteed", "quality inspected", "standard products", to induce even the most critical and sophisticated consumer to buy their products, and quality control laboratories have been set up by manufacturing establishments to maintain the high quality of their products, all indicating the growing consciousness of the producers, manufacturers, consumers and at large, the public, for standardized and quality products. I hope, it will not be long from now, when our schools will include in their curricula a course in standardization.

The degree to which standardization needs to be carried on as a marketing activity depends on the extent to which products are standardized in the process of production. When products are not of uniform variety, size and quality upon completion of production, they must be sorted to conform to such standards as are to be used in marketing them. Many farm products fall in this class.

Grading is simply a means of dividing products of varying quality and size into lots conforming to a certain standards, or it is a means for determining to what standard qualities they conform. When goods produced are not standardized or when there are no standards yet established, grading or classification is necessary.

To grade is to divide goods into lots which have approximately the same characteristics; that is, to sort products into the standard grades to which they belong. This is accomplished in two ways: a) in the grading of some products, the individual products are sorted into lots that conform to the established standards. This process is used to grade such products as oranges, bananas, apples, and is commonly called "grading", and b) with other products, a given lot is inspected to determine the standards to which it conforms. This is commonly carried out by examining samples which are assumed to be typical of the lot. Grains, cotton and beans, for example, are graded in this manner.

Standards are commonly called "grades"; and standardization is sometimes called "grading". Standards for farm products, in particular, are commonly called "grades". In some fruit standards, a distinction is made between grading; which is based on quality, and "sizing", which is not considered as grading. Established standards serve as specifications for manufactured products and determine the classes or grades into which the products of agriculture and the extractive industries are divided. Standards generally serve as a basis for future use, and, to be effective, they must be relatively permanent and must be used by a considerable proportion of sellers and buyers. They give permanence to grades so that the same specifications can be used in various markets and from year to year.

These two processes of classifying products cannot, however, insure the continuity of satisfaction and patronage of a given product if there is no QUALITY CONTROL. It is through quality control that standards are achieved and maintained all along the line of production. To realize the greatest advantage from standardization of commodities, not only must standards conform to recognized demands of the market, but there must be faith on the part of the buyer and seller in the standards established. There must be confidence that the product actually conforms to the standards established. Therefore, we may be safe to say, that "quality control is the combination of all devices and techniques that are used to control quality product at the most economical costs which yield customer satisfaction".

By knowing the three, we can now proceed to ask why should there be such processes in the marketing of agricultural products?

The establishment of standards for products, the inspection of products in order to determine the standards to which they conform, and, where necessary, the sorting of products into lots conforming to established standards are closely related and have as their objective the attainment of the advantages to be derived from marketing standardized products. This is because the manner of buying and selling a product depends in part on the extent to which it is known to be of uniform quality, size, and type, and the extent to which these characteristics conform to recognized standards.

The standardization of farm products is peculiarly difficult. Since the purpose of standardization is to obtain large lots of products which are almost uniform, the difficulties are increased because many farm products are unstandardized as they come from the farm, and the products of different farms differ in variety, quality and size. In order to obtain the benefits of standardization, standards have to be established and the goods sorted into lots which conform to these standards. Eggs, fruits, vegetables, for example, are standardized in this way. Grains, however, are not conveniently sorted so as to conform to established grades. Quantities in bulk and from different growers in different places are sampled, and by inspecting the sample, the grade of the bulk is determined according to the standard to which it conforms. Different lots of grains are, however, sometimes mixed in order to make lots which will conform to certain grades. Each grade covers a certain range, thus grain of high quality may be mixed with poor grain to make the lot barely come within a certain grade. Or grain which falls just below a certain grade may be mixed with enough grain of higher quality to bring it up to the desired grade.

Some farm products are more difficult to grade than other. This is due to the variations in such qualities as the degree of perishability, the extent to which all units of the commodity are alike, variation in quality and size from year to year, and the extent to which all buyers agree on the importance of particular characteristics. It is easier to grade commodities that are not perishable since they need not be rushed to market in order to avoid deterioration. When haste is essential, standards must be quickly applied, and grading is less carefully carried.

Deterioration is inevitable with the more perishable products. The inspection of fresh fruits and vegetables both the quality and condition, or any change in quality of size which may occur after the product has been packed, are important characteristics which should be looked into in grading. A product may meet the requirements of a certain grade when inspected at the shipping point, but because of a change in quality it may fall below specifications when it reaches the different market levels. Some may have decayed, become injured, or shrunk in size, during transporting and handling. Consequently, dealers need to know the condition as well as the quality of the commodity they are handling.

Grading fruits and vegetables at local shipping points is cheaper, but the fact that many fruits and vegetables are highly perishable is an important obstacle to carrying grades determined at the shipping point. In most cases, products often deteriorate before they reach the retail store — further deterioration may take place before they are sold to the consumer — and to regrade such products in the retail store would be expensive.

Quality grading is often very difficult. This is particularly true in the case of consumer's goods, since individual consumers differ greatly in the manner in which the attributes or services or products appeal to them. Different consumers will always react differently to certain characteristics of products, even though the products are standardized, and a particular consumer's evaluation of particular characteristics will frequently change with the passage of time. Since the consumer does not know just what qualities and attributes of many products are most important, or which appeal most to him, and since different consumers are differently affected, vendors find it advisable to differentiate their products from competing goods.

The objects of standardization as a marketing function and tool of industry is to prepare goods so that they will best meet the demands of the market. Its significance lies on the fact that products which are standardized with respect to all characteristics considered important by the buyer can be sold on the basis of sample, grade, description or even trade symbols only, thereby greatly simplifying the processes of purchase and sale, irrespective of distance between buyer and seller. For when the quality, size and quantity of a lot of goods are known, it would be much easier for the contracting parties to agree on price and terms of sale which are the only remaining undetermined factors essential to consummate a sale.

Some of the most important problems involved in marketing center about the division of commodities into groups with important characteristics in common — that is, the establishment of standards and the grading of products to conform to these standards. The object of these efforts is to prepare goods so that they will best meet the demands of the market, and that a common standardized nomenclature can be utilized in bringing about an understanding between the buyer and the seller. The creation of a favorable buyer attitude toward a product, or toward the firm that produces it or the middlemen who sells it is also facilitated when well-graded products are sold. Standardization is essential to the use of mass methods of selling. The modern large-scale methods of selling, whether based on advertising or the use of salesmen, are too expensive to use unless they can be employed to sell standardized products in large volumes.

Standardized products are easily evaluated, and the collection of claims for loss or damage is facilitated When commodities are standardized, market news of supply, demand and price reaches a maximum of accuracy and hence of value. Price quotations serve best in conveying values to buyers and in facilitating the close comparison of values when they apply to commodities that are divided into narrow uniform lots.

Proof of these advantages or good results of standardization is the economic and industrial position of the countries that have used this function in marketing to a large extent. England began in 1901 and today, we depend on her standards of products in which we have a monopoly of the raw material, like abaca, for rope. Another example is our plywood. Japan depends mostly on the Philippines for her supply of lumber to manufacture her plywood. Why can Japan outsell us in our common market of this commodity? The United States went into an all-out standardization in 1918 as a result of the lessons acquired during the First World War. It is a common experience in the Philippines that when we buy some of our needs, we invariably ask, "Is it US-made?" even if the same commodity is available/produced by us. Switzerland, which depends mostly on raw materials it can buy outside of her territory is not behind economically and industrially advanced countries because of her standardization work which began also in 1918. When we buy a watch, do we not inquire whether or not it is Swiss-made? And chances are, that we will prefer the Swiss-made watch to any other brand. These are the results of their strict compliance with the standards promulgated and enforced strictly by their government.

Something significant is happening in the world of young people and we must adjust ourselves through marketing sustained by standardization. The world is becoming standards conscious and if we ever expect to go on the same economic level with other advanced nations, we must of necessity be standards concious, too, for standardization is the common trade language of the world.

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GRADES, STANDARDS AND QUALITY CONTROL IN SOME FOREIGN COUNTRIES

H. J. Mittendorf
Marketing Branch
FAO, Rome

Principles of Grading

Grading means the sorting of produce into different lots of descending market quality, each bearing its own name and label. Quality may be distinguished by size, shape, flavor, degree of ripeness, freshness, yield of meat (livestock), degree of cleanliness (milk, grain), length of staple (in cotton, for example) or other measurable features affecting the commercial value of a product.

Grading and the Buyer

The purpose of grading is to help buyers select the most suitable lots of produce for the uses they have in mind. Accurate grading permits the buyer to purchase more precisely what he wants and is willing to pay for, and to this extent it increases his satisfaction and makes the marketing system more efficient. If grading is not employed, a potential buyer must examine all of the commodity offered before he can determine what he is buying. Where buyer and seller are separated by long distance, and in much export marketing, such inspection is impracticable and trading is difficult except on the basis of some mutually accepted description. Produce can be sold on the basis of samples, but disagreement as to whether a particular lot conforms to the sample is frequent. Many sales are also lost because of the time required to receive a sample.

Grading and the Consumer

Usually consumers buy more of a product, and pay higher prices for it, if they know they will get exactly what they want. If the risk of poor quality is high, they either insist on lower prices or shift to other more dependable products. Accurate grading and labelling are the most precise methods of minimizing the consumer's purchasing risks. Moreover, separation of the supply into a series of grades to be sold at appropriate price differentials broadens the total market. Availability of a low grade generally brings the product within the reach of low-income buyers who might otherwise be excluded. To the high-income buyer the price asked for the first grade may be no deterrent, because he is no longer compelled to buy a mixed lot, part which may go to waste because it is not up to the standards he desires. Thus, well conceived systems of sorting and grading can make nutritionally valuable foods accessible to low-income consumers who would not otherwise be able to afford them; and this can be done without reducing the average price to the producer. With proper grading and strict control, the consumer can be assured of the quality for which he pays. In India, ghee adulteration is very common and there have been many consumer complaints about the quality. A grading system was introduced about 20 years ago whereby the ghee is examined by a chemist, appointed by the marketing adviser of the central government, and a certificate given. On each case is marked the grade, date of grading and the code number under which it was analyzed. To check the labelling, samples are taken at markets and examined; where the contents are not according to specification, the people responsible are penalized. Ghee that is graded has become popular with consumers. In Calcutta, for example, only ghee graded under the Agmark system can be brought into the city.

Grading and the Producer

Grading, and the study of the prices and costs of different grades, is also one of the most effective ways of informing producers as to what consumers want. A clear indication of the value consumers place on specific grades permits producers to plan accordingly and provide the maximum quantity of those most sought after. The expansion of Virginia tobacco production in India has, to a great extent, been influenced by the introduction of export grading.

Methods of Grading

For a grading system to be successful there must be a clear practical economic justification, not just the application of administrative logic. A standardized grading system, for example, has less practical value where both buyers and sellers can be physically present to inspect produce at the point of sale, and where the pattern of trading is one of small dispersed transactions difficult to supervise. In much domestic marketing of fruit and vegetables, from nearby farms, for example, it offers fewer advantages. For such reasons, systematic grading has gone furthest with export crops, and where large wholesale purchases are made. Failure to consider such factors has led to difficulties in implementation and may sometimes jeopardize plans to establish grades under conditions where they would be appreciated.

Grade specifications and standards should be designed to be useful to as many producers, traders and consumers as possible, and easy to apply. I understand that here in the Philippines an attempt to indicate copra quality in terms of free fatty acid content at the farm level proved too complicated and expensive for the producers involved. If the relationship could be established between manufacturers' grades determined chemically, and more easily measurable characteristics, such as moisture content and color, then the initial buyers' grades could be set up on the latter basis. Similarly, traditional descriptions based on place of origin, are best replaced, so far as is feasible, by definitions in terms of size, color, cooking and nutritional quality. The efforts of FAO specialists engaged to improve the preparation of, for example, hides and skins, have been prejudiced because, even after improvement, the hides were still sold on international markets by place of origin and brought the same price as before.

If authorized grades are to obtain the respect from buyers that makes them worthwhile, then it is crucial that the initial sorting and labeling should not be cancelled out by defective handling and sales practice. Poor packing of fruit resulting in physical damage will outweigh any differences between graded and ungraded fruits. Poorly equipped markets are also detract from the value of grading. Eggs graded A will not do credit to this designation if afterwards they are held for long periods in high temperatures.

Export Quality Control

The following quality control rules for groundnuts from Tripolitània are presented as a concrete example of how a compulsory control system is operated. I am quoting this example because it was established by one of my colleagues in the FAO Marketing Branch.

Article I — The following compulsory technical standards will apply to all commercial shipments of groundnuts in shell exported from Tripolitania.

Article II — The only commercial types allowed for export are:

a. "TRIPOLI 2" — each pod containing two kernels. (This commercial type corresponds to those groundnuts known locally as "Egyptian" or "Chinese").

b. "TRIPOLI 4" — each pod containing two or four kernels. (This commercial type corresponds to those groundnuts known locally as "Tripolino" or "Italian" or "Valencia").

Article III — Each of the two commercial types shall be exported under one of the following denominations of quality:

a. "EXTRA" or "STANDARD" or "MERCANTILE" — the respective quality being determined in accordance with established tolerances.

Article IV — The minimum diameters allowed for export are:

a. For "TRIPOLI 2" type — 15 mm

b. For "TRIPOLI 4" type — 12 mm

Anything passing through a sieve having round holes of the diameters respectively indicated for each commercial type cannot be exported.

Article V — Except for tolerance groundnuts in shell for export must fulfill the following requirements:

a. The shape, color and general aspect of the nuts must be typical of their commercial type, without deformities or abnormalities.

b. The number of kernels in each pod must be typical of the commercial tvpe, i. e., two kernels for "TRIPOLI 2" and two to four kernels for "TRIPOLI 4".

c. The nuts must be fully ripe and their kernels completely developed. They must be free from tastes and/or odors which are not typical of groundnuts fully fit for direct human consumption after roasting.

d. The nuts must be healthy and sound, i. e., free from mould, rot, mildew, fungus and insects in any stage of development, both internally and externally.

e. The shells must be very light colored (creamy white) and free from dark spots, both internally and externally.

f. The nuts must be free from extraneous substances such as earth, sand, stones, leaves, twigs, broken or empty pods, etc.

g. The nuts must be well dried.

Article VI — Only one commercial type may be shipped in the same sack or lot. A tolerance of maximum 5 per cent of "TRIPOLI 4" will be permitted in shipments of "TRIPOLI 2" Standard or Mercantile qualities only.

Single jute sacks will be used, the mouths being either hand or machine sown with strong twine. The sacks may be either new or sound second hand.

Second hand sacks, when used, must be in good condition, i. e., clean, effectively repaired where necessary, free from odors and residues of other substances and any previous marks clearly cancelled.

Any size sack may be used, provided that all sacks of the same lot have the same weight and size, with only the optional exception of one smaller sack per lot so as to arrive eventually at the exact total weight contracted for.

Metal seals or tags will not be insisted upon.

Article VII — The following marks only must be applied in an European language on one side of the outside of each sack, in letters of not less than 5 centimeters high, so as to be clearly legible and indelible and in the order indicated.

PRODUCT OF LIBYA
EXPORTERS NAME OR MARK
GROUNDNUTS-TRIPOLI 2 (or TRIPOLI 4)
EXTRA (or STANDARD or MERCANTILE)
NET KGS . . . .
GROSS KGS . . . .
LOT IDENTIFICATION MARK

Labels only bearing the above compulsory marks will not be permitted.

Exporters will be permitted to place on the outside of the reverse side of the sacks any special marking or private brand if requested by their foreign buyer, but in no case can these latter marks contain any indication of quality other than those provided for by those rules, i. e., "EXTRA" or "STANDARD" or "MERCANTILE" as the case may be.

Article VIII — The loading and storage of groundnuts aboard the means of conveyance must be performed with every care so as to avoid damage to the nuts or packing and to ensure good preservation of the produce during the voyage. In all cases the rules issued by the Port Authorities must be adhered to for shipments by sea.

Article IX — All groundnuts intended for export by sea from Tripolitania shall be subjected to an official control in the port warehouses prior to shipment by inspectors of the Government Export Inspection Service in order to ensure that the compulsory export standards and technical rules as laid down herein have been complied with.

Applications for inspection must be made by exporters to the Export Inspection Office situated within the port of Tripoli not less than 24 hours prior to arrival of their consignment in the port or, in the case of exports by road, 24 hours prior to departure of their consignment to the land border post. In the case of exports by road, the application for inspection must designate the town warehouse where the goods may be located.

Applications shall be made on the standard form, bulk supplies of which may be obtained on demand, free of charge, from the Export Inspection Office of Inspectors. A single copy of this application form will be sufficient.

If all these regulations have been followed and the Inspectors have found everything in order, they will grant a Certificate of Inspection in quadruplicate to the exporter. The original and duplicate of this Inspection Certificate may be attached to the shipping documents and dispatched to the foreign buyer, the triplicate will have to be handed to the port authorities before shipment is allowed to take place and the quadruplicate may be retained by the exporter for his records.

The Inspectors will be entitled to avail themselves of the help of the port authorities, border and harbor police and customs officers in order to enforce these regulations and in no case will any of the latter permit the export of groundnuts from Tripolitania unless triplicate copy of the Inspection Certificate is attached to the shipping documents.

Penalties

Any transgression of the present rules will be punished according to the laws of this country.

There should be no relaxation of export standards because a ship is waiting, because supplies of first grade produce are not available, or because the owner of a particular lot is wealthy or influential. A single consignment of inferior quality may suffice to put the good name of the produce of the exporting country in jeopardy; or, in the case of new exporting countries, give their produce a bad name from the beginning. To avoid delay and pressure to relax standards, it is often advisable to make a preliminary inspection at the point of packing and a second sample check at the port of shipment.

Domestic Quality Control

Here I want to take two examples — paddy and perishable produce grown by small farmers. The first paddy will relate to purchase on government account and applications for storage credit from a government agency. Here there is little difficulty in establishing a set of grade quality specifications since the appraising agency is always the same, the government. Usually the main problem is to secure consistent and accurate application of the standards established. To do this, in Japan, the Government Food Agency employs more than 20,000 inspectors. All purchases from producers are made at a co-operative agency, for example, on set days when the inspector will attend. He determines the grade of each producer's lot in the presence of the co-operative manager and issues a certificate indicating the appropriate price. The Government then pays this price through the co-operative.

Under the rice lien credit scheme operated in Korea a grade must be allocated to all paddy accepted in warehouses as a basis for a credit advance. Without this each producer's lot would have to be kept separate, involving high costs. Here the grade is allocated by an inspector of the National Agricultural Products Inspection Service. He comes to each district on the day of the weekly market which is when most farmers usually bring in their grain.

For perishable fruit and vegetables I am going to quote from experience in a Latin American country. Initially there was no grading being done by farmers. Farmers brought their produce to market themselves, by foot and horse-back, mostly. In some areas when roads were passable, a truck picked up the farmers' produce, more often than not 20 or 30 farmers could ride on the truck, each with a bag or basket or two of produce. Many farmers were away from their farms for a long time, selling a few sacks, or baskets of produce. There was no uniformity of quality or price. When a co-operative was organized in this particular area, the farmers were brought together in the common cause of producing better quality produce for market. The truck driver and his assistant were selected men of integrity. They were given special training in grading specific crops raised by this group of farmers. The farmers brought their produce to assembly points along the road and were present when the truck arrived. The truck driver and helper assisted the farmers to make three rough grades — good, fair, poor. The poor grade was left for disposal locally — the good and fair grades were measured or weighed and put on the truck. Each farmer got a receipt for his produce. When the truck arrived at the market, after making several stops at assembly points, it was loaded with graded produce. Middlemen who had previously been buying from these farmers were expected to perform the same services as the co-operative. If they did not conform they were soon out of business. The next stage in scale of operation is systematic grading at a central packing station according to standards set specifically in accordance with buyer's requirements.

International Standardization of Grades

In recent years there has come about an increasing recognition of the commercial benefits to be derived from the adoption of internationally agreed quality standards for agricultural products, including standardization of containers and packaging. It is generally recognized that regional or even world-wide inter-governmental agreements on the standards to be applied would be of great advantage in promoting trade. Various regional and international organizations have been set up to prepare international standards for commodities. The FAO/WHO Codex Alimentarius Program tries to coordinate and streamline the work undertaken by various other groups. Its program of work is based largely on the experience of FAO on milk products standards "Code of Principles for Milk and Milk Products", now adopted by more than 50 countries, together with that of the Economic Commission for Europe on fresh fruit and vegetables. The program is concerned equally with the promotion of trade and with the protection of the consumer's health. It covers both primary and processed foods. The Working Party of the Economic Commission for Europe (ECE) has worked out grades and quality standards covering 27 different kinds of fruit and vegetables: apples, pears, tomatoes, cauliflowers, onions, lettuces, curled leaved endives and broad-leaved (Batavian) endives, peaches, apricots, plums, early potatoes, artichokes, cherries, strawberries, witloof chicory, spinach, table grapes, shelling peas, beans, carrots, citrus fruit (oranges, lemons, grapefruits, clementines and mandarines, satsumas and wilkings), seed potatoes and asparagus. These "European standards" have been accepted for international trade by the majority of countries taking part in the work of ECE. The standards proposed for tomatoes are attached as an Annex. The Organizations for Economic Co-operation and Development (OECD) also encourages the application of European standards for agricultural commodities.

FAO has been carrying out for some years studies on grading and quality standards for rice, cocoa, copra and citrus fruit. The work of the various FAO study groups has made considerable progress towards the establishment of international standards.

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ANNEX

Standards for fresh fruit and vegetables drawn up by the Economic Commission for Europe, now referred to Governments for detailed comments after consideration by the Codex Alimentarius Commission in first reading.

EUROPEAN STANDARD NO. 2

concerning the marketing and quality control of

TOMATOES

moving in trade between European countries

I. DEFINITION OF PRODUCE

This standard applies to tomatoes, being fresh fruit grown from varieties of Lycopersicum esculentum Mill., to be supplied fresh to the consumer, tomatoes for processing being excluded.

II. QUALITY REQUIREMENTS

A. General

The purpose of the standard is to define the quality requirements at the dispatching stage after preparation and packaging.

B. Minimum requirements

(i) The tomatoes must be:

- intact
- sound (subject to the special provisions for each class)
- clean (free of all traces of chemicals)
- free of all abnormal external moisture
- free of foreign smell or taste

(ii) The state of ripeness must be such as to allow the tomatoes to withstand transport and handling, to keep under proper conditions until consumption, and to meet market requirements at the place of destination.

C. Classification

(i) "Extra" Class

Tomatoes in this class must be of superlative quality. Their flesh must be firm and they must have all the characteristics typical of the variety. They must have no defects. No "green bucks" are allowed.
A distinction is made between:

- "round" tomatoes
- "ribbed" tomatoes which are regular in shape but

ribbed; the ribs must not however extend for more than one-third of the peripheral distance between stalk and top.

(ii) **Class "I"**

Tomatoes in this class must be of good quality. They must be reasonably firm, without serious defects and have all the characteristics typical of the variety. They may have slight bruises. Healed or unhealed cracks and visible "green backs" are excluded.

A distinction is made between:
— "round" tomatoes
— "ribbed" tomatoes. These tomatoes must, however, be regular in shape.

(iii) **Class "II"**

This class comprises tomatoes of marketable quality which do not qualify for inclusion in the higher classes.

These tomatoes may be irregular in shape but must satisfy the minimum requirements specified above.

They must be reasonably firm and must not have unhealed cracks. Healed cracks not more than 3 cm. in length are allowed.

III. SIZING

Sizing is compulsory for "Extra" Class tomatoes. It is determined by the maximum equatorial diameter.

Tomatoes must be graded according to the following scale:

35 mm and over but under 40 mm
40 mm " " " " 47 mm
47 mm " " " " 57 mm
57 mm " " " " 67 mm
67 mm " " " " 77 mm
77 mm " " " " 87 mm

Ribbed tomatoes of the largest size may not be classified in the "Extra" Class. For unsized tomatoes of Classes "I" and "II" the minimum diameter shall be 35 mm.

IV. TOLERANCES

Tolerances in respect of quality and size shall be allowed for substandard produce in each package.

A. **Quality tolerances**

(i) "Extra" Class:

Five per cent by number or weight of tomatoes not satisfying the requirements for the class, but meeting the requirements for the class immediately below (Class I), with not more than 2 per cent of tomotoes with cracks.

(ii) **Class I:**

Ten per cent by number or weight of tomatoes not satisfying the requirements for the class below (Class II) with not more than 5 per cent of tomatoes with cracks.

(iii) **Class II:**

Ten per cent by number or weight of tomatoes not satisfying the requirements for the class but fit for consumption.

B. **Size tolerance**

For all classes: 10 per cent by number or weight of tomatoes per package conforming to the size immediately above or below that stated on the package, with a minimum of 33 mm.

C. **Cumulative tolerance**

In no case may tolerance of quality and size taken together exceed:

— 10 per cent for the "Extra" Class .

— 15 per cent for Classes I and II.

V. PACKAGING AND PRESENTATION

A. Uniformity

The contents of each package must be uniform and must contain only tomatoes of the same origin, variety and quality. In addition, for the "Extra" Class and Class I the tomatoes must be uniform coloring and ripeness.

When tomatoes are size graded each package must contain only tomatoes of the same size.

B. Packaging

The produce must be packed in such a way as to ensure that it is suitably protected. For Classes "Extra" and I the bulk of the goods should be separated from the bottom, sides and lid, if any, by some form of protection.

Any paper or other material used inside the package must be new and harmless to human food. When printed matter is used the printing must be on the outside only so as not to come in contact with the produce. The tomatoes, when packaged, must be free from any foreign bodies.

VI. MARKING

Each package must bear the following particulars legibly and indelibly marked on the outside:

A. Identification

Packer) name and address or code mark.
Dispatcher)

B. Nature of produce

"Tomatoes", (when the contents of the package are not visible from the outside).

C. **Origin of produce**

District of origin, or national, regional or local trade name.

D. **Commercial specifications**

- Class
- the indication "ribbed" where appropriate
- Size or the indication "unsized".

E. **Official control mark** (optional)

When the above-mentioned particulars are written on a label the latter must be affixed to the outside of the package and must not be less than 40 square centimeters in size.

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GRADES, STANDARDS AND QUALITY CONTROL IN SOME FOREIGN COUNTRIES

F. A. Shah
FAO Regional Marketing Specialist
Asia and the Far East

My colleague Mr. Mittendorf has already covered in his lecture the principles of grading and its bearing on the buyer, consumer and producer and the methods of grading. He has also referred to export quality control in Libya and domestic quality control in Japan, Korea and some Latin American countries and international standardization of grades. In this brief lecture, I would like to supplement his lecture by putting forward the introduction and development of grade standards and quality control in some detail in India and a brief reference to Japan.

An essential preliminary to the introduction of grade standards is the enactment of legislation to empower a government to prescribe grades for agricultural products, fix grade designation marks and to make rules for their enforcement. Adequate laboratory facilities to measure accurately the commercial characteristics of the different commodities graded and an inspection service to exercise an effective control over the quality of graded products are also essential. Grade standards without an effective quality control may defeat the very purpose for which they are introduced.

The value of standard grades for agricultural products is appreciated but the progress in applying them in the region is rather slow. Sometimes this has been secondary in national official policy, as for instance, for rice in Malaysia, to efforts to increase output with a view to reduce imports. In some countries lack of trained personnel and laboratory facilities has impeded the introduction of standard grades.

Many countries in this region have adopted compulsory grading of selected products for export trade. Japan perhaps has the largest number of commodities (37) falling under this category. Next comes India with 8 commodities followed by China-Taiwan; 5 commodities, Pakistan; 2 commodities, Thailand and Burma; one each. The success achieved and the experience gained in the form of improvement in quality and price by compulsory grading of certain exportable commodities has encouraged some governments to bring some more export commodities on this list. The Government of Pakistan, for instance, proposes to add hides and skins, coriander seed, san-hemp and eggs to the existing list of export commodities subject to compulsory grading.

Grading in India and Japan

India is perhaps one of the countries in the region where systematic measures have been taken to establish government marketing organizations, enact legislation for introducing grade standards, establish laboratories and create inspectorate for exercising control on the quality of products graded for domestic consumption and for export. I would, therefore, like to discuss in this lecture the working grade standards and the quality control measures taken in that country and Japan in some detail.

India

One of the earliest items of marketing development work undertaken by the Government of India after the establishment of the marketing organization in 1935 was the enactment of legislation for prescribing grade standards for agricultural produce. The Agricultural Produce, (Grading and Marketing) Act was placed on the Statute Book in April, 1937 and grading of a few commodities was undertaken in the same year. A copy of the Act is enclosed as Appendix I to the text of this lecture. Since grading of each product is accompanied by a set of rules made under the Act, Appendix II contains a copy of the Orange Grading and Marking Rules. The Act is permissive in scope. The preference of consumers for quality products, and the premium that they willingly pay for articles of assured purity and quality, act as an incentive to producers and processors to undertake grading, the premium compensating them for the expenses incurred on grading besides a small margin of profit.

A set of General Rules framed under the provisions of the grading act, among other things, allow for (a) inspection by the marketing staff of premises where grading will be done and inquiries into the bona fides of the persons to whom Certificates of Authorization are to be issued, (b) fixing a small fee to meet the cost of the grading equipment supplied and for the special inspection services, (c) the standardization of containers and packages, (d) the procedure for exercising quality control and (e) imposing penalties for non-adherence to rules and instructions.

The approach has been to bring within the ambit of grading only the superior qualities of agricultural produce, leaving the lower assortments, blemished produce, etc. to be sold in the ungraded form. The proportion of the pure produce that would be covered by the grades prescribed, in respect of articles intended for consumption within the country, varies from commodity to commodity. It is estimated to be about 5 per cent for ghee while it may be as high as 80 per cent for butter.

Carefully drawn tests, physical and chemical, are prescribed for judging the purity and quality of the produce graded. They are kept as few in number as possible to save expenditures in the performance of a large number of routine estimations. They are nevertheless comprehensive enough to enable a correct appraisal of the purity as well as the quality of the produce.

In order to facilitate the grading of various products in the assembling centers, laboratories have been set up by (i) private parties, (ii) cooperative institutions and (iii) state governments authorized by the Marketing Adviser. There were about 30 private laboratories working in 1959/60. With a view of exercising control at the grading stage, the appointment of chemists working at these laboratories is subject to Government approval. For determining grade standards and for exercising quality control, the Government of India has also established a few regional control laboratories. The Central Control Laboratory dealing with the analysis of ghee, butter, oil, and gur (crude lump sugar) is located at Kanpur, and a subsidiary laboratory for ghee alone at Rajket. The Central Wool Testing Laboratory is located at Bombay, Essential Oil Grading Laboratory at Cochin and Tobacco Moisture Contents Laboratory at Guntur. With the rise in the tempo of grading work under the Third 5-Year Plan, the Central Government decided to set up 8 regional laboratories in different parts of the country and a well-equipped Central Control Laboratory at Nagpur for coordinating and test checking of graded products .

While grading for internal consumption is purely voluntary, it has been made compulsory under Section 19 of the Sea Customs Act in the case of certain commodities for purposes of export. This measure was taken to safeguard the quality of exports in the highly competitive world markets. The procedure of grading and marketing remained essentially the same as for produce for internal consumption except that the element of compulsion was introduced by a notification under the Sea Customs Act for a particular commodity by prohibiting its dispatch out of India unless it was graded and marked in the manner specified in the notification. Grading for export is now compulsory specified in respect of san-hemp, cigarette tobacco, wool, bristles, sandalwood oil and lemongrass oil. During 1961 the total quantiy of compulsory graded exports amounted to over 71,300 tons, valued at about U. S. $62.0 million or 9.5 per cent of the value of all agricultural exports. The question of including some other commodities like spices, cashewnut kernels, vegetable oils and oilseeds, lac, hides and skins is engaging the attention of the Government.

When grading is made obligatory prior to export, the grade standards already prescribed, are revised and the number of grades increased, if necessary, so as to bring a larger proportion of pure produce within its scope. The emphasis ceases to be on high quality: it is rather an attempt to classify the produce into a convenient number of grades allowing even the poorest quality to be graded but under its own appropriate level. Consumers in foreign countries are also consulted while prescribing these grades. The changes in consumers' preference are duly taken into account which may lead to the amendment of the grades. In order to avoid monopolies and promote exports, newcomers to the trade are encouraged by issuing certificates of authorization for undertaking grading. These measures have brought considerable improvement in quality. For example, the clean wool content of consignments which averaged only 50 per cent during the pre-grading period had increased to 83.5 per cent in 1960 and the consequent price differential had been a substantial gain both to the trade and the country. The quantities exported have also increased, as for example, of unmanufactured tobacco from 42 million pounds in pre-grading period to 101 million pounds in 1959-60.

The success of any grading scheme depends upon effective quality control and great attention is naturally bestowed to this aspect in India. Wherever homogenization is possible, the grade designation mark are allowed to be applied only on containers which have been filled with homogenized product, for example, ghee, butter, vegetable oils and essential oils. The product after homogenization is analyzed at the packer's laboratory by chemists and duplicates are test checked at control laboratories. In addition, marketing staff and certain other duly authorized officials, collect samples from graded and marked produce placed on the market by the authorized parties and submit them under code numbers to the control laboratories concerned. The details in respect of the party who graded it, the grade assigned, the place where the sample was collected and so on are completely analyzed with utmost expedition and the results are communicated direct to the headquarters of the Directorate of Marketing and Inspection. An attempt is thus made to relate the results with the actual analysis of the lot at the time of grading. Very serious notice is taken in case there are any discrepancies.

In respect of commodities where homogenization is not possible, and the assortment is based on judgment of color, texture, etc., the grades have to be approved by an official of the Directorate of Marketing and Inspection before the grade designation marks are affixed. The graded lot, however, is not allowed to be moved until the grades assigned have been confirmed by a senior official of the Directorate who conducts a check of a prescribed percentage of the total number of packages marked. This provision is vigorously applied in respect of commodities compulsorily graded for export.

The grading of perishables, e.g., fruits and eggs has given rise to a number of problems. Attempts to insist on date marking eggs have not found favor with the sellers. In respect of perishables generally, grading at producing and assembling centers, especially during period of high and humid temperature appears to serve little purpose unless cold storage and facilities for refrigerated transport are made available. The products generally deteriorate and considerable damage is sustained during transport and storage before it actually reaches the consumer.

The Directorate of Marketing and Inspection of the Government of India has six divisions responsible for exercising control over the quality of various graded products, both for domestic consumption and for export. The Wool, Bristles and Goat Hair Inspectorate is under the overall charge of a Senior Marketing Officer stationed at Nagpur. He is assisted by another Senior Marketing Officer, Wool stationed at Bombay and Deputy Senior Marketing Development Officer, Bristles stationed at Kanpur The Senior Marketing Officer, Bombay is further assisted by 8 officers stationed at different wool collecting centers in the country. The San-hemp Inspectorate and the Tobacco Inspectorate are under the charge of another Senior Marketing Officer stationed at Nagpur. He is assisted by one Senior Marketing Officer for Tobacco and by a Deputy Senior Marketing Officer for San-hemp, stationed at Guntur and Shivpur, respectively, the main assembling centers for these commodities. Both of them are assisted by 10 inspectors. Similarly, the inspectorates for Essential Oils and Ghee consist of over 70 technical officers working in various laboratories and the supervisory staff. There is also an Inspection Service and Planning Division consisting of a Senior Marketing Officer assisted by 10 junior officers. In addition, there is the Fruit Products Organization looking after the fruit products industry. A Senior Marketing Officer is the Chief of this Division assisted by 7 technical officers stationed at different centers in the country.

Japan

In Japan quality control of agricultural products is carried on under the provisions of "The Agricultural Products Inspection Law" enacted in April, 1951. It empowers the government to inspect agricultural products with a view to encourage fair and orderly trade and to improve quality. The ultimate object is to improve agricultural economy and rationalize consumption of agricultural products. This Act applies to a large number of products including foodgrains, oilseeds, vegetables, barnyard grass, straw, etc. It also applies to rice, barley, wheat and milled rice imported by non-government agencies. Inspection is made in respect of kind, class, quantity, packing and quality. The Law also deals with other aspects of inspection, such as method and procedure for inspection, fixation of inspection fee, administration of inspection, penal action against illegal inspection.

The Enterprise and Marketing Section of the Agriculture and Forestry Economic Bureau is responsible for the prescription of grade specifications and inspection of agricultural products entering export channels. Grade specifications are obligatory for 37 products. They are subject to inspection by the Government or private inspectors approved by the Government.

The Food Agency, a permanent organization established in 1941, is responsible for the fixation of grade standards and inspection of agricultural products consumed within the country. Paddy, husked rice, milled rice, barley, naked barley and wheat are subject to compulsory inspection by Government. In case of 26 agricultural products other than those mentioned above inspection is carried out by the Central Government on request. There are some 36 products in respect of which inspection is done by the local government on request. The Inspection Section of the Food Agency maintains about 500 branch offices all over the country. Almost in each village there is a dispatch office. In May, 1965 there were about 13,000 inspectors working in the country. Inspection of all Government purchases is mandatory which generally takes place at the cooperative warehouse in the presence of the cooperative staff and the seller. Corruption in inspection is almost unknown. This system not only ensures fair deal to the seller and the buyer but has also resulted in improvement in the quality of produce and better prices to the farmer.

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ANNEX I

AGRICULTURAL PRODUCE (GRADING AND MARKING) ACT, 1937

Act No. I of 1937

An Act to provide the Grading and Marking of
Agricultural (and other) Products.

Whereas it is expedient to provide for the grading and marking of agricultural (and other) produce;

It is hereby enacted as follows:

1. Short title and extent

a. This Act may be called the Agricultural Produce (Grading and Marking) Act, 1937.

b. It extends to the whole of British India, including British Baluchistan and the Sonthal Parganas but excluding Burma.

2. Explanation

In this Act, unless the contrary appears from the subject or context:

a. "Agricultural produce" includes all produce of agriculture or horticulture and all articles of food or drink wholly or partly manufactured from any such produce and fleeces and the skins of animals;

b. "Counterfeit" has the meaning assigned to that word by Section 28 of the Indian Penal Code;

c. "Covering" includes any vessel, box, crate, wrapper, tray or other container;

d. "Grade designation" means a designation prescribed as indicative of the quality of any scheduled article;

e. "Grade designation mark" means a mark prescribed as representing a particular grade designation;

f. "Quality", in relation to any article, includes the state and condition of the article;

g. "Prescribed" means prescribed by rules made under this Act;

h. "Scheduled article" means an article included in the schedule; and

i. An article is said to be marked with a grade designation mark, if the article itself is marked with a grade designation mark or any covering containing or label attached to such article is so marked.

3. Prescription of grade designations

The General Government may, after previous publication by notification in the Official Gazette, make rules:

a. Fixing grade designations to indicate the quality of any scheduled article;

b. Defining the quality indicated by every grade designation;

c. Specifying grade designation marks to represent particular grade designations;

d. Authorizing a person or a body of persons, subject to any prescribed conditions, to mark with a grade designation mark any article in respect of which such mark has been prescribed or any covering containing or label attached to any such article;

e. Specifying the conditions referred to in clause (d) including in respect of any article conditions as to the manner of marking, the manner in which the article shall be packed, the type of covering to be used, and the quantity by weight, number or otherwise to be included in each covering;

f. Providing for the payment of any expenses incurred in connection with the manufacture or use of any implement necessary for the reproduction of a grade designation mark or with the manufacture or use of any covering or label marked with a grade designation mark (or with measures for the control of the quality or articles marked with grade designation marks including testing of samples and inspection of such articles or with any publicity work carried out to promote the sale of any class of such articles).

g. Providing for the confiscation and disposal of produce marked otherwise than in accordance with the prescribed conditions with grade designation mark.

4. Penalty for unauthorized marking with grade designation mark

Whoever marks any scheduled article with a grade designation mark, not being authorized to do so by rule made under Section 3, shall be punishable with fine which may extend to five hundred rupees.

5. Penalty for counterfeiting grade designation mark

Whoever counterfeits any grade designation mark or has in his possession any dye, plate or other instrument for the purpose of counterfeiting a grade designation mark shall be punishable with imprisonment which may extend to two years, or with fine, or with both.

6. The Central Government, after such consultation as it thinks fit for the interests likely to be affected, may by notification in the Official Gazette declare that the provisions of this Act shall apply to an article of agricultural produce not included in the Schedule (or to an article other than an article of agricultural produce) and on the publication of such notification such article shall be deemed to be included in the Schedule.

THE SCHEDULE

(See Section 2)

1. Fruit
2. Vegetables
3. Eggs
4. Dairy produce
5. Tobacco
6. Coffee
7. Hides and skins
8. Fruit products
9. Ata
10. Oilseeds
11. Vegetable oil (including hydrogenated oils and vegetable fats)
12. Cotton
13. Rice
14. Lac
15. Wheat
16. San-hemp
17. Sugarcane gur (Jaggery)
18. Myrobalans
19. Bura (powdered sugar)

ANNEX II

ORANGES GRADING AND MARKING RULES

1. Short title and application.

a. These rules may be called the Oranges Grading and Marking Rules.

b. They shall apply to oranges in India.

2. Grade designations.

Grade designations to indicate the quality of oranges of certain varieties produced in India are set out in Column I of Schedules I and II.

3. Definition of Quality.

The quality indicated by such grade designations is set out against such designations, in Column 2 and 3 of Schedules I and II.

4. Grade designation marks.

The grade designation mark shall consist of a label bearing the design set out in Schedule III, specifying the grade designation and of the following color:

Grade designation	Color of label
Special	White
I	Red
II	Blue
III	Yellow
IV	Green

5. Method of marking

The grade designation mark label shall be securely affixed to each package of oranges, and shall clearly show the following particulars:

a. Variety
b. Number
c. Net weight
d. Name of packing station
e. Date of packing

6. Method of packing

a. Containers may be either returnable or non-returnable. They shall be clean and suitable for the purpose. All packages shall be securely closed.

b. Packing material, if used, shall be clean and dry.

c. The oranges in any container shall be of one variety, of one grade, reasonably uniform and the top layer shall be representative of the entire contents of the package in respect of size, color, maturity, shape and freedom from defects.

SCHEDULE I

Grade designations and definition of quality of oranges (sangtara or santra) produced in India (See Rules 2 and 3)

Grade designation 1	Definition of quality	
	Minimum diameter* 3	State or condition 3
	(Inches)	
Special	3-1/2	1. The oranges shall have reached a stage of maturity which will permit the subsequent completion of ripening in the ordinary course of transport and marketing.
I	3	2. The oranges shall be of reasonably uniform colors. No orange shall be entirely green.
II	2 - 3/4	3. Each orange shall have the shape normal to the variety and be free from malformations.
III	2-1/2	4. The oranges shall be free from defects due to diseases or insects or mechanical injury affecting the fruit internally.
IV	2 - 1/4	5. Oranges of the type commonly known as pola, i.e., with a thick loose skin shall be packed separately from oranges of thin skinned type known as **Battidar.**

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* A tolerance of 10 per cent shall be allowed for accidental errors in grading in respect of oranges corresponding with the size of specification in the next lower grade.

SCHEDULE II

Grade designations and definition of quality of mozambique ("mosambi") oranges produced in India (See Rules 2 and 3)

	Definition of quality	
Grade designation 1	Minimum diameter* 2	State or condition ** 3
	(Inches)	
I	3	1. The oranges shall be firm and shall have reached a stage of maturity which will permit the subsequent completion of ripening in the ordinary course of transport and marketing without appreciable loss of firmness.
II	2 - 3/4	2. The oranges shall be reasonably uniform color. No orange shall be entirely green.
III	2 - 3/8	3. Each orange shall have the shape normal to the variety and shall be free from malformations.
		4. The oranges shall be free from defects due to diseases or insects or mechanical injury affecting the fruit internally.
		5. None of the oranges shall have a coarse (GODHDI) skin.
		6. New crop (Nawa Bahar) shall not be mixed with old crop (Juan Bahar) oranges.

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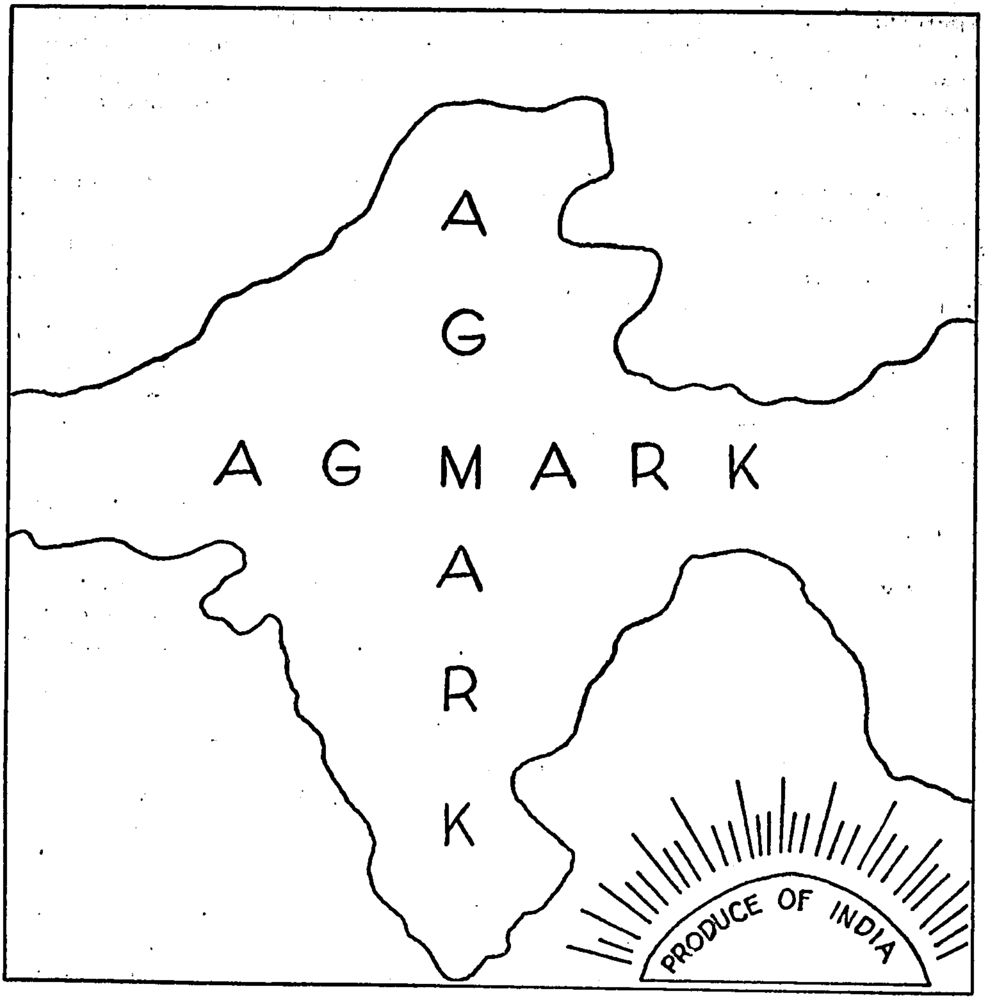
* Oranges over 3-1/2 inches in diameter shall be excluded. A tolerance of 10 per cent shall be allowed in any one package for accidental errors in grading in respect of oranges corresponding with the size specification in the next lower grade.

** In respect of items referred to in Column 3, a tolerance of 5 per cent shall be allowed in any one package to cover accidental errors in grading except the defects referred to Item 4 for which no tolerance shall be allowed.

SCHEDULE III

Grade designation mark for packages of oranges
(See Rule 4)



STORAGE AND WAREHOUSING OF FOODGRAINS

Bibiano B. Arzadon
ECAFE/FAO Agriculture Division
Bangkok, Thailand

Main Function of Storage and Warehousing

Agriculture is characterized by relatively large and irregular seasonal and year to year fluctuations in production. On the other hand, consumption of farm products is relatively stable. For instance, most foodgrains (particularly rice) are harvested at relatively short periods within a year but their consumption is more or less relatively uniform throughout the whole year. This particular situation presents a problem — that of spreading seasonally concentrated outputs over a period of time of a relatively stable demand.

According to a study made by Dr. F. A. Tiongson, one of the "critical problems" in the marketing of paddy in the Philippines is the inability of some of the farmers to store their paddy.[1] Although there are many reasons why farmers are not able to store their produce, the major problem is the absence of adequate storage facilities. According to the survey, of the farms studied, almost half of their paddy sold was not stored. On the other hand, about 40 per cent were stored in the individual farmers' warehouses, granary or "bodega"; 6 per cent at FACOMA's warehouses; and about 5 per cent in storage facilities such as sheds, baskets, facilities in or under the farm houses.

The effect of the lack of storage facilities could also be better illustrated by the example shown below.[2]

e.g. In the Philippines during the time of harvest, the supply of paddy is large relative to the existing demand. Partly in view of the lack or inadequacy of storage facilities, farmers are forced to sell their paddy even when prices are at their lowest. It should be noted that in this country, during the month of December when the newly harvested paddy in October and November are dried up and ready to enter the trade channels, the price of paddy begins to decrease. By January when harvest is still in full swing and those harvested from October to December are already passing through the different stages of marketing, the seasonal index for the price of paddy reaches its lowest level. During the lean months (May to September), prices are high, reaching the peak in late September. Although full harvest starts in October, the price is still high in that month because the paddy is not yet ready to circulate through the channels of trade.

If such were the situation as illustrated above, adequate storage facilities would enable producers to adjust or spread out their disposals to the market and to take advantage of price opportunities. In broad terms, the main functions of storage and warehousing, therefore, is to adjust supply and demand. This means that one would have the product available at the desired time. Storage would also help maintain a reasonably stable price for producers as well as for marketing agencies and consumers. It would also act as a source to fill-in the need for a carry-over of stocks into the following season whenever such need arises. In short, storage is an offset to differences in the times at which things are done.

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[1] Tiongson, F. A., **Improved Merchandising of Selected Farm Products**, Community Development Research Council, University of the Philippines: 1964.

[2] Arzadon, B. B., "Naric and the Rice Situation: 1954-1959", Economic Research Journal (Vol. VI, No. 4), U. E.: March 1960.

Review of Existing Storage Facilities

It is worthwhile to know first the existing storage facilities in this region before discussing the economic aspects of storage. The possibilities as to type and location of grain storage are many. In Asia and the Far East, reports indicate that there is a wide variety of farm storage structures. Some are built specifically for rice storage, others for general farm usage including storage. For farm storage facilities, materials employed are usually mud mixed with straw and cow-dung, bamboo or bamboo splits, sun-dried bricks, timber, planks, and galvanized sheet-metal. Floors may either be just the bare ground, planks, bamboo or bamboo splits, concrete slab, etc. Roofs may be thatched with grass, reeds or straw, tiles, planks, galvanized sheet-metal, etc.

Most farm storage are built on the ground. In some countries, however, farm storage places are on the roofs of farm houses, while in other countries they are built on stilts (wooden, bamboo or concrete). The various shapes of farm structures are either box-like, cylindrical or conical. For bulk storage on a small scale in some countries is the cylindrical metal drum which may be of various sizes with a ventilating device. On a larger scale, local methods of foodgrains may range from open-air piles of grain in bulk or bags with or without roof, surrounded by a fence or wire or wood to concrete warehouses or silos.

Structures are either the room-type, hangars, sheds, bins, warehouses or barns. Many countries apply pesticides to reduce losses from insect damages. Others use some "conditioning system" consisting of air ducts and lateral branches installed in the floor to prevent moisture condensation and maintaining a desired temperature; or when needed for drying the grain, for aid in fumigation, and for aeration after fumigation. Modifications of this ventilating system are used in some countries which are considered economical.

Economic Aspects of Storage

We have just seen in brief the existing storage structures and practices in the ECAFE region. To put these basic things into practice, and/or to improve further the methods used in improving storage structures and the means to reduce losses from insect damage, etc. would cost money, time and effort which otherwise could also be employed in other ways. This means that any activity in connection with storage involves capital investment and risk taking which must be weighed against the returns to be derived. This calls for an economic decision making on the cost/benefit ratio of any alternative storage plan. In this connection, no standard approach is expected. However, that which should be kept in mind is to determine the advantages offered by different methods and forms of storage for a particular set of circumstances and level of development and for particular times and places.

Storage Costs

Like in other business, one has to follow certain economic principles before putting in any amount of investment. The procurement of new storage equipment, application of pest control measures, the employment of skilled staff, etc., all involve a lot of capital. Before anyone ventures to put in the investment, this question is usually asked: "Will the savings or income resulting from the new investment be sufficient to cover running and maintenance costs, interest charges on the capital employed, and amortization over the effective lifetime of the plant and equipment, and still offer net benefits to the investor?" This question appears to be a "straightforward comparison between costs and returns". It should be noted, though, that costs could be determined fairly accurately; but returns are hard to evaluate. They depend on how many times a storage unit is used or filled within a given period and on how much benefit it brings in terms of convenience over a number of years, which is not easily measurable, objectively.

The following are the five possible types of costs to be considered in determining the total cost of storage:[1]

1. The storage costs necessary to provide and maintain the physical facilities for storage. These should include the cost of handling and the cost of providing space with the proper temperature and humidity including also such items as repairs, depreciation, and insurance of the facilities against loss.

2. The interest on the amount of capital invested in the stored product. This should be assesed at the rate of interest which would have to be paid on a loan.

3. The operating costs to cover expenses such as salaries of staff, expenses incurred in maintaining records, etc.

4. The possible loss that might arise from adverse economic conditions as when the general price levels decline, in which case the grain stored might have to be sold at an actual loss. However, the expectations for favorable price levels are incentives to undertake storage operations.

5. This type of cost is less concrete than the others. This include expenses such as decline in value during storage and loss from shrinkage, deterioration, and insect and rodent damage. In the case of maize, however, it may increase in value while there is shrinkage in volume.

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[1] FAO series of lectures on marketing; and Brunk, Max E. and L. B. Darrah, **Marketing of Agricultural Products**, The Ronald Press Company, N. Y. 1955.

Another way of determining the approximate cost of storage is to study the seasonal change in price. It is also said that the cost of storage more or less equal to the increase in prices from the seasonal low to the seasonal high.[1] So that when the rise in price would exceed costs, storage activities are likely to be encouraged.

e.g. In Thailand the seasonal low for white Thai rice (100%) in 1964 was Bht 163 per sack and the seasonal high was Bht 190. The cost of storage based on the principal just stated earlier would then be more or less Bht 27 per sack. This figure is close to the actual cost of storage, which if estimated on a per year basis would be Bht 25.50 per sack of 100 kgs per year.[2]

Storage and Total Returns

It was stated earlier that the appraisal of returns arising from storage is rather hard. To show the nature of this problem, an example is illustrated, as follows:

e.g. In Thailand, rice millers usually hold large stocks of rice. For instance, one miller interviewed in Thailand stated that his stocks over the year varied from one-third of total output soon after the harvest to virtually nothing prior to the harvest season. Supposing that the value of the mill is Bht 10,000 for every ton of capacity and that the amount milled for each ton of capacity over the year is 100 tons; and the value of a ton of paddy is Bht 660, the value of the stock of rice held at the peak period would be Bht 22,000 for every Bht 10,000 worth of plant and equipment.[3]

The point being brought by the above example is the veracity of the calculation since millers may easily have more money tied up in stocks of rice than in the mills. Now if both forms of capital would give an equal return, a miller thus earns as much from stock holding as from milling. It follows, therefore, that earnings derived from the stocking of rice comprise the gradual appreciation of rice over the year. In Thailand, millers through their experience have learned to time their stock releases over the year so that the value of the rice would appreciate just enough to compensate them for storing it. It should be noted that if appreciation of rice would be less, millers do not store rice at all but if appreciation would be great, excessive storage would be encouraged and as a result it would hike up the price early in the following year.

The return to storage in the case of rice (e.g., in Thailand) could also be calculated by taking the difference between the prices of new and old rice less the cost of storage. For instance, if the price of new rice would sell for Bht 163 per sack and the old rice would sell for Bht 190, the difference between the two would be Bht 27. Now if the cost of storage which is shown below is Bht 25.50,

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[1] Brunk, M. E. and L. B. Darrah, op. cit.

[2] Usher, Dan Notes on the Thai Rice Trade (Preliminary) Bank of Thailand, Bangkok.

[3] 1/3 x 100 x 660 = 22,000.

Insurance	Bht 1.00	
Damage to sacks	Bht 1.25	
Loss of weight	Bht 1.50	
Rent of godown	Bht 5.00	
Interest charges	Bht 12.50	
	Bht 21.25	per ton per month or
	Bht 25.50	per sack per year,

the net income arising from stock holding for a year would be Bht 1.50 per sack (Bht 27 less Bht 25.50).

Again, if new rice (5%) would sell for Bht 140 and the old for Bht 160 and the cost of storage would be Bht 25.50 per sack per year, but the miller does not rent the godown and uses his own money to finance his stocking of rice so that his absolute cost of storage would be Bht 4.50 per sack per year, the net income from stock holding would thus be Bht 15.50 (Bht 20.00 less Bht 4.50).

Storage and Seasonal Price Variation

As noted earlier, durable commodities such as foodgrains have a more or less stable demand throughout the year and may also be held for a considerable period of time without serious deterioration. The levels of prices during the year are related to the degree of output during the period. Consequently, in the absence of government intervention, market prices would show too marked seasonal variations.

In the case of annual crops, the anticipated supply of the new crop influences the current price situation. If the new crop is estimated to be low, anticipated prices will be high and when output is expected to be large, anticipated prices will be low in the forthcoming season. Similarly, if one holds the produce on a considerable scale, it will diminish currently available supplies on the market and tend to hike up current prices. At the same time, the prospective amount available for sale at later periods (through the facilities of storage) are increased and the result is anticipated prices will tend to decline.

The increase of seasonal low to the high period is theoretically enough to cover the costs of carrying the desired volume of commodity until the time when it is needed. This shows then that seasonal price can be affected by changes in the quantity held in storage and also the cost of storage. So that "anticipated prices can not rise above current prices by more than the cost of carrying the product to the later date, but anticipated prices may fall below current prices by an amount limited only by the extent to which current uses of the products are postponable to a future period".[1] It follows, therefore, that the level of seasonal price movement[2] is determined largely by the size of the current stock. The higher the quantity stored the lower will be the seasonal price fluctuation. It should be noted that the widest seasonal margins in prices of foodgrains occur in areas where there are no grain dealers at all.

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[1] Waite and Trelogan, Agricultural Market Prices, John Wiley & Sons, Inc., N. Y. 1951.
[2] The rise in price by the amount of carrying charges.

Credit and Storage[1]

It was stated earlier that where grain dealers are lacking, widest seasonal margins in the prices of foodgrains occur. There may be a number of people in said locality where there are no grain dealers who have the ability and willingness to hold grain but they do not have the capacity to do so as they are impeded by the lack of capital necessary for the installation of storage facilities or where credit is available, it entails a high rate of interest. In like manner, producers, because of lack of credit facilities, are forced to sell their produce soon after harvest to pay for debts and expenditures. Traders, likewise, can only hold limited quantities because where credit is available it is either restricted or expensive. Thus, lack of credit is one of the main reasons for lack of storage resulting to loss and waste and also price fluctuations.

One of the functions of storage is to facilitate the extension of credit. If a producer, for example, has rice in sound storage and is offered as security for credit the agency or person extending the loan has less risk and as a result can afford to charge the producer a lower rate of interest. Grain held in storage is a sound security when it is protected against physical risk such as damage from hazards or loss by deterioration. Such grains stored could not be taken out from the storage unless the lender gives consent. This is the principle upon which the public warehousing licensing and receipt system has been set up in many countries.

Once a commodity has been placed in storage, the warehouse operator has the sole custody of the commodity. What he does is to issue to the depositor a certificate of storage defining exactly the physical aspects of the commodity. The products can be withdrawn only upon surrender of the warehouse receipts. Against such receipts, credit could be extended since the warehouseman will only release the goods in store, to holders of the warehouse receipts. The owner of the commodity who has been extended credit must repay the loan and get back the receipts upon payment in order to obtain the commodities used as collateral. This transaction is not complicated when the grain stored is in standard grade lots. Under this function, the warehouseman does not need to return exactly the same grain as was deposited, but an equal volume of a comparable grade from another source. The advantage derived from this system is to permit the use of storage capacity to a fuller extent. Grains can also be purchased or sold easily with physical movement by endorsing the receipt from seller to buyer. However, in lending against warehouse receipts, due precautionary measures must also be exercised to verify that goods are actually being held under storage as some warehouses have been known to issue fraudulent receipts.

The same system may be applied to processor, merchant or when feasible, co-operatively owned warehouses. A specific part is locked off from the remainder and placed under government bond and supervision. A certificate is then issued on the grain stored in this part and can be used as collateral for loans. In this manner, the owner of the grain can obtain short-term credit on it without incurring the cost of moving it out of the place where it would normally be stored. To operate under this system requires close government supervision and the existence of credit institutions adapted to its needs.

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[1] FAO Series of lectures on marketing.

Benefits Derived from Improved Storage

The discussion earlier indicate the role that storage can do to improve agricultural marketing. The advantages derived from it could be summarized hereunder.

Since one of the important marketing functions is to "bridge the gaps between the times and places of production and the times and places of consumption", storage facilitates the adjustment of the rate of flow into the market of foodgrains to consumers' needs. In this connection, producers can also increase their ability to hold grain after harvest and take advantage of price opportunities. The example shown below indicates the awareness of the large and progressive Filipino farmers of the benefits they could get from storage over the farmers of similar sized holdings.

> e.g. In the Philippines, paddy farmers used many methods to benefit from the highest possible prices for their produce. In a study made, it was found out that 85 per cent of the large farmers interviewed stored their rice and waited for seasonally higher prices. [1]

Relating to the function of storage in preventing or minimizing physical losses and quality deterioration of the grain held in storage, the other advantage is it facilitates bulking. Storage prepares, helps efficient operation of grinding or milling the grain; facilitates quality control, sorting of lots designed to customers' needs, packs the consigned goods for economical transport; and, in addition, it acts as intermediary of the transportation and sales business of the stored commodities. As a result, storage widens the market area to be served.

Regulation of Storage

Although there are many forms of benefits that can be derived from storage, there might be some abuses that spring from its use. As experienced in the Philippines, storage, for example, may encourage speculation of an undesirable nature. There is a possibility for large warehouse operators to do some centralized control of grain supplies and with a collective effort among themselves, they could keep merchandise out of the market as a means of increasing prices. Experiences, elsewhere, also showed that some dealers have at various times circulated false rumors regarding conditions of supply held under storage in which case a psychological wave is created to influence prices for their own advantage. For this reason, there is a need to curb these malpractices through government regulation and control of storage facilities within certain limits and in varying degrees. A warehouse act, for instance, may provide for the licensing and bonding of warehousemen and may also enforce regulatory measures (such as the supervision and inspection of warehouses) to establish the integrity of the warehouse receipts issued. The law may also define the warehousemen's responsibilities and liabilities; and the nature and extent of the warehousemen's lien on the goods. In this connection, the government then should issue licenses only to warehouses with net assets comparable to the volume of business they handle and whose reputation is good from the angle of management, practices and equipment.

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[1] Tiongson, F. A., Improved Merchandising of Selected Farm Products, CDRS, U. P. Manila: 1964.

The Need for and Location of Storage

The need for and the location of storage depend upon the area to be serviced, the size of the crop and the length and the duration of the flow of foodgrains in the marketing channels (from producer to consumer). An example below would show this situation and also the factors to be taken into consideration:

e.g. In the Philippines, rice supplies vary from harvest to harvest depending upon weather conditions. There exist also in the country many consumers who maintain no stocks of their own and are dependent on what the market offers. For this reason, the Government has special measures to intensify local purchases and at times to import foodgrains when necessary to maintain grain reserves. This particular situation shows the need for public or government warehouses. The year 1960 could be taken as a particular example. During that period, there were approximately 44 NARIC-owned warehouses with an aggregate allowable storage capacity of 3,060,880 cavans of 56 kilos of rice. Except Manila which has 9 NARIC-warehouses, there were only 15 provinces in which the other 35 warehouses were located. These facts showed that for that particular year, there was a poor distribution of warehouses. This situation was further aggravated by the lack of facilities in conditioning the grain for storage so as to minimize spoilage. It should also be noted that generally, the surplus areas were the Cagayan Valley, Central Luzon, and Southern and Western Mindanao. Within these areas, out of their total production, the total volume percentagewise entering into commercial channels ranged from some 22 per cent to about 43 per cent; and that whether in a regional deficit or in a regional surplus, many of the paddy producers may have some to dispose of in the market.[1] Partly, in view of the lack of government owned warehouses with facilities of conditioning grain held in storage, the NARIC was not able to fill in the shortage in the deficit areas. What should have been done was the establishment of warehouses in deficit areas just as well as in the surplus areas in order to ensure movement of supply from Cagayan Valley and Central Luzon to other regions of Luzon and, to some extent, some parts of the Visayan region; and from Southern and Western Mindanao to Northern and Eastern Mindanao and, to some degree, a small portion to the Visayas.

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[1] Arzadon B. B., and J. Gutierrez, **Establishing Regional Floor Price.** (Study submitted to the Undersecretary for Agriculture) AED: November 18, 1958.

The choice of location for new storage facilities needs therefore considerable study. Once a grain storage or warehouse is built (especially when it is made of concrete) and placed in an unstrategic or bad position, it is most likely that permanent deficit operations may result from not utilizing the storage or warehouse to the minimum capacity needed for economic operations. There are many cases where this happened in the provinces because little economic planning was taken into account or no marketing surveys were undertaken. For instance, where the greater portion of the population which are non-farming exists in the main producing areas, storage facilities should not be concentrated near urban centers. Another factor to be considered is the availability of transport facilities. In this connection, the distance of the farm from the nearest city, town, wholesaler or public market must also be considered. In the Philippines, for instance, according to a study made by the University of the Philippines, the average distance from the farms to the nearest city in most regions ranged from 15 to 60 kilometers. The average distance from the farm to the nearest wholesaler in general, were located within 6 to 25 kilometer radius. As to the distance between the farms and the towns with public markets, it ranged from 3 to 14 kilometers. Because of such distances between producers and consumers which are common in most provinces in the Philippines, and because of the complexity of the marketing system, it may be necessary that some storing might be undertaken at strategic points all through the marketing system. Other factors such as availability of efficient transportation system, types and conditions of roads or ports or wharfs must also be considered in relation to the place of storage and to the areas of production and consumption.

Capacity and Type of Storage and Equipment

In determining the type and site of storage plant to be set up, many economic factors must be taken into account. Let us take my province, Ilocos Norte, as a concrete example. Most farm holdings there are relatively small and the quantity of grain to be stored is not substantial. Capital is scarce but labor is cheap. Under these conditions, storage to be built must be simple and local materials that abound the province must be utilized to be economic. It would be unthinkable under such conditions to use air-tight storage or concrete silos, etc., to keep in store a small amount of grain. The type of construction should depend on the costs of the different types of materials in the different areas. Others might only improve the small storage they already have (e.g., wooden storage boxes, barrels, galvanized bins, clay jars or huge bamboo baskets) either under the house, inside or outside the house in order to prevent or minimize losses due to rats or varmints and treating the grains with proper amount and kinds of insecticides.

In places where capital is most scarce relative to labor and time, and a huge outlay of expenditure of one project may sacrifice the development of others, one might choose the initially less expensive of the practical alternatives. For instance, in Nueva Vizcaya during the late fifties, there were two large storage bins that were designed and built by highly competent engineers which could be compared with the technically advanced and expensive storage bins in Illinois, U.S.A. They found out later that the bins could not practically be used because no money is available to establish complimentary facilities (e.g., platforms near the railway for loading and unloading, conveyors, ventilators and dryers to condition the grain, fumigators, etc.). It might have been more desirable to have built an ordinary storage bin and assumed a sacrifice in operating efficiency if by so doing, the required minimum capital for optimum economic development could be better approximated and if development could be extended over a wider area.

The same principle as in the above would also apply in determining the kind and amount of mechanical equipment for handling and moving the products in storage. With the system of many farms in the Philippines where paddy is piled in the open field before being milled and stored, it is most likely that grains arriving for storage would contain a great percentage of foreign matter and a high moisture content. Under this situation, arrangements for drying and cleaning would be needed. However, when cost of power driven equipment could hardly be borne by the operator, hand sieving and sun drying would be a convenient alternative. Similarly, if a plant is utilized sparingly — that is, grain is stored once a year and removed only once a year or at long intervals, then the use of mechanical handling equipment might be uneconomic. On the other hand, for plants located in big "haciendas" or in important terminal markets, a substantial amount of investment in mechanical equipment for loading and unloading might be justified because speed is necessary in moving grain from dryer to bin and from bin to bin in order to make fuller use of the storage capacity and promote more efficient marketing. The criterion to be followed, therefore, as said by Dr. Abbott of FAO is "the amount of mechanical equipment installed in a grain storage plant should be related to the turnover of grain during the year, the cost of such equipment, and the cost of the hard labor alternative". In short, these factors should be taken into consideration on a basis of actual cost in relation to the benefits to be derived.

Another factor to be considered is the internal design of storage units. Would the grain be stored in separate lots? Would the sacks of grain be easily moved in and out of the storage place? These should be answered positively especially when different grain owners are involved or different types and qualities of grain are handled and mixed order is often practised. Another thing to be considered is "would storage be used profitably for other purposes other than holding grain?"

Ownership, Management and Finance

In many countries, the ownership of storage is often an issue especially where it is observed that merchants have been profiting through storage by manipulating stock releases in order to enhance prices. It was reported in several publications that this particular problem has been minimized in the Philippines after the nationalization (actually it is Filipinization) of the rice and corn industry. Since ownership of storage or warehouses is significantly correlated with wholesaling and retailing in the Philippines, with the "Filipinization" of the rice and corn industry, ownership of storage for rice and corn has been made possible to a larger segment — the farms, the government or cooperatives — thus competition has been maintained and diversity of interest ensured. Before the "nationalization", subjectively, there was practically no element of competition, especially in the provinces as ownership of warehouses or storage places were in the hands of a few.

Many Government in the ECAFE region extend credit under liberal terms for the construction of crop storage. Precautionary measures, however, must be formulated to check the tendency of easy access to credit which might result in the construction of plants which are costly and seldom used to capacity.

The importance of skilled management in storage must not be overlooked. It should be noted that storage requires technical and economic know-how. This means competent planning and daily maintenance by trained personnel is a must. In management, one has to know not only the economic aspects of it as has been discussed lately but also the natural conditions for grain storage. This involves particular attention to the field practices before milling, the relationship between temperature and humidity, a wide knowledge of entomology, engineering, chemistry, etc. For these reasons, government such as those of India, Iraq, Japan, etc., have put up extensive storage construction programmes; have established special training programmes for plant managers, fumigators, etc. and other specialists for farm storage.

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PRICE POLICIES INCLUDING STABILIZATION AND BUFFER STOCKS

Bibiano B. Arzadon
ECAFE/FAO Agriculture Division
Bangkok, Thailand

Introduction

In the 1964 Economic Survey of Asia and the Far East, it stated that after three years of disappointing constancy, the general index of food production (1952/53-1956/57 = 100) for the developing ECAFE region rose by some 4 per cent during 1963/64 over the previous period. The increase was largely due to the gains in the output of cereals and sugar. The survey further stated that although generally the result of 1964 was heartening, the index showed a gain in food production of 11 per cent over the first four years of the Development Decade [1], an increase which was not significantly greater than the growth of population. In fact, singling out the Far East region [2] alone, the index of per caput food production in this particular area has been decreasing by more or less 1 per cent since 1961/62 to 1963/64 [3]. For instance, in Burma, per caput food output decreased by almost 5 per cent in 1963/64 from the previous year; in Ceylon, per caput food output dropped by 2 per cent; and even in Japan, per caput food production decreased in 1963/64 from a year earlier by 6.5 per cent. On the other hand, in the Philippines during the same period, per caput food output increased by only 1 per cent from the previous year which is not significant. The main problem that the Philippines and most countries in the region face is not actually an acute emergency food shortage but a lag in the rate of expansion in agricultural production.

In this connection, it is to be noted that the increase in total output in 1964 owed more to better weather conditions than to advances in farming. For this reason, FAO is exerting its efforts to improve the technical standards of production. On the other hand, it should be noted that production decisions in most countries are made by the individual farmer partly under the influence of the prices he receives for his products and the prices he has to pay for his inputs. In view of this situation, various Governments in Asia and the Far East, tried to influence the prices of farm products by instituting a degree of intervention in the form of price policies. Their scope varies according to the nature of the economy of the country, the food supply situation, and the role of a commodity in the country's foreign trade. On the whole, however, price policies in the countries of this region are geared primarily towards influencing prices of foodgrains. For this reason, it is attempted in this lecture that the subject under discussion be related primarily to foodgrains. It is also attempted herein to delve further in examining the appropriate objectives for agricultural price policies and the measures for their implementation and possible effects.

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[1] The U. N. Development Decade called for a doubling of the rate of increase of food production during the 1960's. The envisaged annual rate of increase of the over-all economic growth for the Development Decade is 5 per cent.

[2] Excluding some countries in the ECAFE region (e.g., Iran, Afghanistan, New Zealand, Australia, Western Samoa, Outer Mongolia) and excluding, too, China (Mainland).

[3] Source of basic data: FAO.

Factors Influencing the Price Policy to be Adopted

In the framework of the general situation just explained earlier, the following deserve notice from the start:

1. **General characteristics of the economy.** Agriculture is still the mainstay of the economy in nearly all countries in Asia and the Far East where the great majority of the people earn their livelihood. Nearly nine-tenths of the agricultural output of these countries consist of food products; and agriculture's contribution to gross domestic product ranges from 34 to 38 per cent in China (Taiwan) and Thailand to 49 to 56 per cent in India, Indonesia and Pakistan. Food consumption (largely cereals) amounts to a high proportion of national expenditure because the region, after being a net exporter before World War II, has become an increasing net importer of foodstuffs. In some countries, however, their economy is based on the exports of primary products especially rice and agricultural raw materials which are highly sensitive to unstable world prices. For this reason, foreign trade in these agricultural products, particularly rice, is controlled by almost all the governments.

2. **Undulating character of agricultural production.** Individual countries in the region, in spite of irrigation being progressively utilized, still depend on natural rainfall. For this reason, these countries are subject to important annual fluctuations. Undulations in production could also cause wide fluctuations in prices from year to year to differences in prices of a commodity between localities at any given time.

3. **Subsistence farming.** With the exception of the large plantations or estates producing agricultural products primarily for exports, farmers in the region do their farming on a small sized farm (generally fragmented ones) with a little amount of capital. After harvest they usually sell a great portion of their produce for cash and late in the year they have to purchase cereals to meet their consumption requirements. As a result, at harvest time prices are at their lowest and in the late months of the year they are at their highest. Furthermore, in the advent of poor harvest, the seasonal movement could be more pronounced. As a result, seasonal fluctuations in prices of foodgrains in the countries of Asia and the Far East, just as well as annual fluctuations and price disparities are prevalent. In this connection, it should also be noted that only a small percentage of total production of foodgrains — about 30 per cent or less — flows into the marketing channel. For this reason, the effect of prices and of producer price policies on the incomes of the small farmers is slight.

4. **Production response of farmers.** It is sometimes thought of that if the small farmers would reduce their offerings in the market, they might respond to higher farm prices. On the other hand, the presence of intermediaries, who may resort to unfair marketing practices, might perhaps cause imperfections in the market making it possible for them to get a relatively large slice from the prices paid by consumers. For this reason, the increasing movement of price developing at retail or wholesale markets could not be felt to some extent by the producer. In addition, aside from the imperfection of the market caused by the intermediaries, the prevalence

of indebtedness among small farmers gives no definite assurance that any producer price stipulated or set up would be received by all the producers.

5. **Transfer payments to or from agriculture.** Although the agricultural sector is relatively larger in size than the other sectors of the economy, it was recognized by some countries that available government funds for agricultural price support would be limited. This is in view of the fact that in most countries, aside from external sources, the financing of economic development depends to a large degree upon capital formulation in agriculture.

In this connection, income levels of urban people, in this region, although higher than agricultural workers, are still low so that prices of foodstuffs had to be set within the reach of consumers.

Major Objectives of Government Price Policies

1. **To stabilize the cost of living of consumers.** For a long time, the foremost objective of government price policies is to stabilize the cost of living. This is an indispensable way to steady economic development. This policy was more of checking the rise in the cost of living of consumers (the non-producing ones) and to reduce actual or potential inflationary tendencies. Importance of this policy was recognized after the outset of the Second World War and during the early postwar period of food shortage when the main objective then was to increase food output and implement food control in order to lower consumers' prices — thus curbing inflation. This was an offshoot of the disruption of trade during the war years between the food surplus and food deficit countries of the region.

To implement this policy, the Government had to assume the responsibility in supplying essential food items at reasonable price levels to non-producing consumers. The very purpose of this scheme was to check the rise in the price level and to boost the morale of the civilian population. In connection with this programme, the Government undertook local purchases (particularly rice) through government agents or direct purchases from the producers and the maximum prices by the consumers were fixed. To stabilize the prices especially when available supply of locally puchased foodstuff is deemed very insufficient to meet domestic demand, the government resorted to limited imports from abroad on government account to supplement the available domestic supply. The quantity imported would then be distributed to the non-producing consumers through licensed retailers. Some countries also did rationing system as a means of distribution. Coupled with this measure as a corollary policy, certain programmes were implemented to effect increases in output within a reasonable period of time.

Since 1953, the food situation improved, and there was a decline in the prices of foodgrains in the world markets. As a result, strict governmental control over the purchase of foodgrains and even distribution including rationing had been relaxed. During this same period, population continued to grow at a fast pace, per caput incomes also rose and expenses in importing essential production goods for economic development also increased. As a result, there was an increase in the effective demands for foodgrains from the non-producing consumers. In the wake of these developments, although there had been increases in domestic foodgrain production, its rate of increase has not generally kept pace with the growing demand. For this reason, pressures on prices were left which made such countries to take remedial steps to stabilize the cost of living of non-producing consumers.

In the implementation of these schemes of controlled distribution including rationing, administrative organizations are deemed necessary, e.g., food procuring office, food import and distribution offices. In this connection, it should be noted that the cost of administration is usually very high. Another outcome as experienced by various countries is that the normal consumption pattern is often distorted when superior cereals on the ration (e.g., rice) are supplied at fixed prices that make them relatively less costly in relation to the open market prices of non-rationed or non-controlled foodstuffs (e.g., cassava and millets) than in the period before the adoption of such distribution schemes.[1]

2. **To improve the income of farmers in relation to income in other sector of the economy.** This objective entails a guaranteed support price. For instance in Japan, the objective of its producer price policy is to promote selective expansion of farm production (e.g., rice) and at the same time lessen the gap between agricultural and non-agricultural incomes. This is determined by a new method called the "Cost and Income Compensation Formula". In this method, the official price is computed on the basis of the cost of rice production shouldered by rice-selling farmers of average efficiency. In this connection, to narrow the gap between agricultural incomes with those of non-agricultural workers, costs are calculated on the basis of the average urban wages and not the actual wages in rural areas. However, it was reported that on the basis of this method of calculation, the 1962 producer price for rice in Japan exceeded the official consumer price until some revisions were made. On account of this situation and other circumstances there is a move to consider the modification of the present price policies for foodgrains.

It should thus be noted that this programme seems to be workable only in the developed economies. This programme could not be feasible in most countries in Asia and the Far East as they cannot afford to subsidize the incomes of farmers that form the greatest portion of the population.

3. **To save foreign exchange on imports.** This objective is true to food deficit countries in the region. In these countries, either the guaranteed price for foodgrains, e.g., rice, is increased or other agricultural support measures other than price policies are used to encourage domestic production of rice and other food crops in order to minimize the outflow of foreign exchange to be used in the importation of such products. A good illustration of this is Ceylon. In this country special attention is given to increase the domestic production of dried chillies, maize and sorghum due to the depletion of foreign exchange caused by the importation of these

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[1] Dr. Mohinder Singh, **Lecture on Price Policies Including Stabilization and Buffer Stocks** (National Training Centre on Agricultural Marketing, Ceylon).

crops. For this reason, as an incentive to producers, the guaranteed prices of these products which had remained the same since 1958 were increased in 1961.

4. **To earn revenue for the government or increase foreign exchange earnings.** Increased production had been taken as an action in the rice surplus countries in order to expand earnings just as well as to meet their internal demand. This objective is common to the traditional rice exporting countries in the region, e.g., Burma, Thailand, Republic of Viet-Nam, Cambodia, etc. The action taken in this case is generally for the governments to keep down the domestic prices of the surplus foodstuffs (mainly rice) below the international market level in order to earn revenue which could be attained by the levy of export taxes and regulation or control of exports. Domestic prices must be lower otherwise, with a premium coupled with a high domestic price, exporters must buy at a lower price.

In Burma, for instance, to secure for development purposes gains realized from rice exports, the Agricultural Marketing Boards was established as the monopoly exporter of rice through 1962. In 1964, the Government had complete and exclusive control over the purchasing, domestic distribution and export of rice. In Thailand, to boost the exportation of farm products—the amount of which is the excess over domestic consumption—and to stabilize export prices the Government decided an exemption of these products from export duties and instituted the fixing of minimum export price. These measures conform with the development policies which aim to expand agricultural production and to raise farm price levels.

5. **To stimulate the expansion of production.** Nearly all countries in the region have the objective to increase foodgrain production, particularly rice, either to reach self-sufficiency, or to save foreign exchange from imports, or to earn additional foreign exchange and at the same time to maintain growing domestic demand. In any case, this requires an incentive price to farmers or a price that is above the free market level with the intent of course that such a price would encourage further production.

To insure the effectiveness of any price incentive scheme, it might be necessary that an organization be established to do local purchases in the producers' area. Experiences in a number of countries indicated that where farmers are not assured of an opportunity to sell their surplus at such designated price level to the stabilizing agency, the scheme itself would not be effective. Another problem in this connection would be the high cost of administration as purchasing organization have to be built up as a net work over a period.

6. **To prevent the falling of prices to a low level.** Various governments in the region took cognizance of the possible adverse effect of low prices on production. Countries in the region had this experience during the early postwar years when there had been severe shortage of food supplies and where the main objective of the Governments was to see that the cost of living of consumers (non-producers) did not increase substantially. In this connection, the governments through their designated agents were required to purchase domestic surplus at a fixed price which was thought of as not too low for the producers. Similarly, since 1958, various governments of a number of countries in Asia and the Far East recognized the

importance of fixing the producers' price of rice — the price at which government agency should make its local purchases—to be not lower than the import prices of free farm prices. This policy is significant when there are bumper crops or in the presence of reduced demand for farm products. Usually, this involves the setting up of floor prices or guaranteed minimum prices (e.g., the minimum prices fixed at different levels for the three main buying seasons in Burma).

7. **To smoothen out temporary price fluctuations.** Usually, farmers in most countries of the region sell their produce immediately after harvest because they either pay their debts to the moneylender or sell their output to meet their cash needs. As a result, prices are at their lowest level immediately after harvest while at the closing months of the crop year, prices make an upsurge. Also, farmers in Asia and the Far East generally depend upon the frequency of rainfall. In the presence of insufficient or excessive rainfall, production decreases. In this connection, it should be noted that even relatively small decrease in production may cause a relatively big reduction in the surplus available for the market hence, a rise in prices. On the other hand, following a bumper harvest, prices usually decline and when they really decrease to low levels, agricultural producers may be forced to offer more for sale; so that when more are offered for sale in the market, there would be a further drop in prices.

There are some conceivable measures to remedy these temporary fluctuations in prices. The most common is through storage and warehousing programme extending some side line services as low-cost commodity loan. This would enable the producers to acquire some cash before harvest time and help them spread out their sales over a longer period when prices will be favorable. The other measure is the establishment of buffer stocks coupled with floor prices to farmers and ceiling prices to traders.

It should be borne in mind that since most farmers are severely indebted to moneylenders even long before harvest time, it may be necessary to augment these measures with some arrangements where the producer could be extended some production and consumption expenses to tide them over between harvest and sowing periods. This will make the scheme more effective.

Determination of Producer Prices

One of the problems in price stabilization is to decide at which levels the official prices are to be fixed.

For instance, if the price of foodgrains is established at a high level, it may cause consternation on the part of non-producer consumers; it may also lead to the closing of export outlets. On the other hand, if the price is set at a low level, production and marketing of grain may decrease. This would result to heavy procurement and rationing operations which are rather expensive and ultimately might end up to large importation — depleting precious foreign exchange. For this reason, it would, therefore, be hard to set up a price level at which the best interest of the whole economy is served.

It is, thus, worthwhile to examine the broad categories of establishing producer price, namely: Formula Method (cost of production, formulae and parity formulae) and "ad hoc" method. [1]

Cost of production formulae. The formula method might be the "cost of production formulae" or "the parity formulae". On the "cost of production formula", estimates of the cost of production per unit of output are calculated. This is in view of the fact that prices of essential foodcrops if allowed to drop to very low levels at a considerable period of time would give adverse effects to production and marketable surplus. There are however some problems in connection with the use of cost of production as a basis for price determination. In the first place, it leaves off the demand for the commodity on domestic and foreign markets and is criticized as favoring only one sector of the economy — the producer, while neglecting the consumers. In the second place, there is also a lack of consideration of the relationships between prices of competing commodities for which the development policy of a country may have assigned different priorities. Another difficulty is estimates of costs of production usually vary with the place and among cultivators so that selecting a frequency in the distribution as an arbitrary point for price fixing would be biased. Taking the average cost of production would also be very unreliable.

Parity formulae. The formula considers the power of a commodity to command other commodities in exchange based on the price of the commodity in question and the prices of other commodities.

A parity price, therefore, is " a price that would enable the seller of unit of a commodity to purchase as large a quantity of other goods and services as he was able to purchase with a unit of the commodity in a given base period".[2] To make this clearer we could derive a formula:

$$Pp = P^1o \times Ip$$

where Pp is the parity price;

P^1o is the price of the commodity in the base period; and

Ip is the index of the cost of things purchased.

(hypothetical case only)

e.g. The base period for parity computation is 1954-1957 average = 100 in Philippines. In this period rice averaged ¢88.4 per ganta, and the Index of prices paid by farmers including taxes and interest was 100. For instance, if the latter index were 120, a ganta of rice would have to sell for ¢88.4 times 1.20 or 106.1 centavos, to have the same purchasing power as in the base period. This would be the parity price for rice.

The concept of this formula is laudable because it is simple and workable. Furthermore, in the computation of this formula, one needs the indices of farm production and living expenditures as well as data on prices received by farmers. The collection of these data is also very important and they are of great value as economic indicators.

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[1] FAO, Report of the FAO/ECAFE Centre on Policies to Support and Stabilize Agricultural Prices and Incomes in Asia and the Far East, (FAO, ETAP Report No. 887).
[2] Waite and Trelogan, Agricultural Market Prices, N. Y. 1951.

On the other hand there are some disadvantages in the use of this formula. For instance, we have a problem in the assembling of the necessary data. The construction of indices is a big problem itself, especially if one tries to consider a suitable base period. This formula does not consider trends in demand as a factor in price formation nor takes into account charges in input/output relationships as an offshoot of innovations or technological progress. Furthermore, the implementation of this formula is rather costly, involving large income transfers to agriculture from other sectors of the economy. This situation is further aggravated by the fact that the majority of the population in Asia and the Far East are small farmers.

The non-formula method. These are the "ad hoc" methods which consider relevant factors (as estimates of unit costs of production, prices of competing crops, relative levels of farm and non-farm incomes, world market prices, demand and supply relationships, general price levels, etc.) which may be changed with time or statutory listings of factors to be considered ideal in this region in view of the problems enumerated in the formulae method.

Considerations to be taken in fixing prices. Experience elsewhere indicated that a precise formula in fixing price level (e.g., cost of production or parity formula) would result to rigidity on price relationships which eventually would result to adverse effects in the economy. Instead a number of countries approved the use of several indicators as bases in determining the price level. The following are some of the desired indicators to be used which most countries already collected and constructed:

a. Retail, wholesale and farm price of important commodities;
b. Moving averages of wholesale prices;
c. Prices of the main imported or exported commodities in international markets;
d. Estimates of the frequency distributions of production costs;
e. Information in changes of food pattern in relation to income;
f. Cost of living and general indices of retail, wholesale, and farm prices;
g. Indices of prices received and paid by farmers and their ratios;
h. Indices of cost of production, and if possible input/output relationships; and
i. Indices of rural and urban wages and wage rates.

What should also be borne in mind is the desirability of allowing prices to fluctuate within a reasonable given range (flexible) rather than set a price at a fixed level. Also in setting up a price, levels should be established considering allowances for differences in grades, storage costs and to some extent some degree of variation within the season. These factors when taken into consideration would lead to a reasonable degree of price stability at the farm level.

What should also be guarded against the use of the "non-formula method" is, it may be too flexible; hence insufficient assurance that producers or consumers may get the benefit of the price. The setting up of a price under this method may also be influenced by political expediency or due to exigencies of some temporary considerations and consequently, subjective bias of the administrators arise.

Implementing Price Stabilization Programme

In this connection, it is worthwhile to summarize first the impediments which were stated earlier in making an effective implementation of price policies in Asia and the Far East. It should be noted that implementation would rather be difficult in view of the small scale of production and small marketable surplus; lack of fluid resources; and weak bargaining position of most of the farmers. It is not uncommon in this region to find farmers offering their produce less than the official price to moneylenders or middlemen immediately after harvest just to get cash to meet the immediate needs since they cannot afford to wait for a better market. However, there are broad ways in which price policy may be implemented which are discussed in the foregoing.

Buffer stock operation. Generally, the method used in most countries in Asia and the Far East in stabilizing prices on domestic markets is through regulating market supplies by buffer stock operation aided by controlling imports or exports of the commodity in question. Through this scheme, the government or its agents would keep a stock of the commodity to be stabilized and would be replenished through purchase when prices take a dip below a certain level; hence the market is supported. From this same stock, releases are made through retail or wholesale outlets or both at times or in localities where prices are rising unduly. This operation involves the construction of adequate warehouses; transportation and warehousing; and also the employment of an army of trained staff; and above all, the availability of adequate operating funds. This is really an extremely expensive undertaking especially when a large buffer stock is operated only periodically like a large surplus stock involving a high capital value of storage space including interest, operating and administrative cost.

The buffer stock operation, on the other hand could be implemented with less financial risk and with minimum administrative difficulties if a limited degree of fluctuation in price is allowed and let the stock be operated regularly as a part of the regular machinery of distribution. This will allow some room for the gradual adjustment of supplies to changing demand. If the scheme is also designed for a long-term stabilizing programme, the financial risk may be greater but it could be evened out over the years, and minimized if there is a possibility of adjusting the amount of imports or exports. Buffer stock operation as a long-term scheme has certain limitations. The very fact that agricultural products could not be stored for a long period of time without damage and waste is already a limitation. However, a prompt and systematic turnover of stocks may be a remedy to this problem.

Risks and administrative problems in connection with the operation of buffer stocks could be remedied to some extent if market operations are also supplemented with selective credit control or other various indirect incentives. The effectiveness of stabilization schemes like this buffer stock operation depends largely on the marketing and credit facilities. In this connection, the need for purchasing centers creates the need also for co-operative credit. This shows the necessity for integrating these functions (marketing, credit and supply of production requisites)[1] if buffer stock operations be effective and a success.

Regarding the locale of buffer stocks, it would depend upon the objectives. If the motive is to stabilize the prices at farm levels, storage capacity and other facilities incidental to marketing should be near the points of production. On the other hand, if the intention is to stabilize prices to consumers, stock should be stored near the main consuming centers.

Some Problems Involved in Implementing Price Policies

As noted during the course of the lecture, it could thus be stated that no matter what the objectives of price policies are, the implementation of these schemes involve excessive administrative costs to the taxpayers and the government.

Also when prices are fixed at certain levels making them rigid, the normal consumption pattern might be distorted especially when superior cereals on the ration (e.g., rice) are supplied at fixed prices which make them relatively less costly in relation to open market prices of non-rationed or non-controlled foodstuffs than in the period before the adoption of such distributive schemes. Also, once prices are fixed, even if allowed to be flexible, the determination of the level might have been subjected to bias — such as political pressures or considerations of temporary expediency.

Another problem is implementing price policies regarding the aspects of co-ordinating economic policies in general with other aspects of agricultural policies in particular between the "Stabilizing" agency and the other Government Departments of Ministries or other public corporations which have something to do with food administration. In short, the manifold regulations in the enforcement of price controls and the ramified activities of the stabilizing organization in implementing the scheme pervade every activity and segment of the entire economy, not only in the agricultural sector but also the other sectors of the economy which make implementation a great problem. Also normal law-enforcing agencies usually accept small responsibility for price control and generally the control agency does not have enough police powers. Or, courts take a long time to handle cases on price control violations. As a result the price policy is not effective.

Finally, another deterrence to implement price policies are the farmers themselves. In general, those in favor of price programmes are consumers because they recognize the benefits of holding down the cost of living, while the producers themselves are very sensitive to the limitations imposed on profits and returns.

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[1] Dr. Mohinder Singh (Lecture in the National Training Centre on Agricultural Marketing), Ceylon, 28 May — 13 June 1964.

ECONOMIC CONSIDERATIONS ON PLANNING COLD STORES FOR AGRICULTURAL PERISHABLES

H. J. Mittendorf
Marketing Branch
FAO, Rome

The great expansion of refrigeration facilities in the marketing of agricultural perishables in developed countries during the last decade has had many advantages to producers, traders and consumers. Refrigeration has not only reduced the physical losses of agricultural perishables during marketing. It has contributed to a better supply of higher quality products to consumers during a longer period of the year, and has also enabled producers to reach distant markets which were previously outside the scope of unrefrigerated marketing channels. The application of refrigeration in developed countries has also led to a reorganization of marketing channels and structures. It has facilitated the rapid development of self-service stores and supermarkets and, for instance, the change from livestock to meat marketing. It can be concluded that refrigeration has been one of the most important innovations introduced recently in the field of agricultural marketing in developed countries and constitutes one of the most important factors which has contributed to more efficient marketing in industrialized countries.

What is the role of refrigeration in agricultural perishables in tropical countries? There is no doubt that refrigeration will play an increasing role in the improvement of agricultural marketing in developing countries. The same benefits can be derived from its application in developing countries, namely: reduction of wastage and losses, evening out of seasonal and short-term fluctuations, reduction of quality deterioration and the reaching of more far distant markets. However, the introduction of refrigeration in the marketing channel has to be studied extremely carefully. Unfortunately, there are various examples where refrigeration facilities have been wrongly located or the capacity needed has been exaggerated, resulting in considerable financial losses. These unsuccessful investments in cold stores demonstrate clearly the need for a thorough study on the economic feasibility of investment in refrigeration equipment. It has also to be remembered that refrigerated installations at only one point on the distribution channel is often useless. Often a complete cold chain from the producer to the consumer is needed.

When considering the establishment of cold stores, the following elements have to be studied carefully: (1) the cost of storage; (2) the demand for cold stored products, and (3) the cost and losses of alternative marketing methods.

1. Cost of refrigerated storage

The cost of cold storage depend on a number of factors such as the program of cold storage (length and temperature of storage) affecting the type of cold store, construction and running costs of electricity and capital, utilization of the capacity, management, and weight losses during storage. In a cold storage program, it must be determined what products and quantities will be stored, at what temperature, and for how long. Three different ranges of temperatures can be applied:

> between about 15° and 20° C (59° to 68° F); sometimes called "restoration cooling" — can be used for short-term storage of tropical fruit and vegetables at terminal markets;
>
> between about O° and 6° C (30° to 43°F) at which, for instance, certain fruits and vegetables of temperate zones (i.e., apples, pears, potatoes) can be stored for several months;
>
> between about — 12° to — 20°C (10° to — 4°F), so called "freezing temperature" cold storage, at which, for instance, frozen meat is stored for several months.

It can generally be assumed that the lower the temperature, the higher will be the costs of insulation and thus construction of cold stores, and the higher the consumption of energy for cooling purposes. With regard to energy consumption, there are also differences according to commodity. Storage of vegetables, which are still in the process of respiration, requires more energy than, for instance, meat stored at the same temperature. There are also great differences, with regard to heat generated by respiration, between different types of vegetables. An experienced refrigeration engineer must in each case estimate the probable quantity of energy needed for the cold storage program.

Construction costs vary from case to case and from country to country. Construction costs of refrigerated fruit stores in Western Europe amounted in recent years to about U.S. $20 per m^3, which multi-commodity cold stores with low temperature compartments are calculated between U.S. $30 to U.S. $60 per m^3 for large stores (3,000m^3 and over), and up to U.S. $120 per m ^{3} for smaller buildings.

The operating costs of cold stores depend on the amortization, capital and maintenance costs, and the costs of management, power and labor. In Table I the approximate operating costs of a cold store of 10,000 cubic meters, with a capital outlay of about U.S. $450,000, operating at temperatures between —20° to 6°C (—40° to 43°F), are given. The costs have been calculated on the basis of different rates of interest, of the capital invested (8 and 12 per cent), of different prices of electricity (U.S. $0.02 and 0.10 per kw) and of different degrees of utilization of the capacity, in order to demonstrate the effect of these factors on the total costs. On the basis of electricity costs of U.S. $0.02 per kw, an interest rate of 8 per cent and a full utilization of the capacity during a period of nine months (75 per cent of the 12 months' storage capacity), the total operating costs can be estimated at about U.S. $117,689 of which about U.S. $90,000 or 77 per cent are fixed costs. In view of the high percentage of fixed costs in the total running costs, it is of great importance that a cold store is used during the year to a high percentage of its capacity in order to reduce the storage costs per ton and month. If it is assumed that 3,000 tons of produce are stored in this cold store for one month, the storage cost per ton and month, at nine months', i.e., 75 per cent utilization of capacity would be U.S. $36, and at 25 per cent utilization of the total capacity U.S. $11 per ton stored. Under Western European and North American

Table 1. Approximate running costs of a selected cold store of about 10,000 m³ (353,150 cu. ft.) at different rates of interest, different utilization of capacity and different costs of electricity (U. S. dollars)

Cost item	Costs of electricity (U. S. $ per KW) 0.02						0.10
	Rate of interest						
	8			12			12
Fixed costs per year							
Amortization & interest							
Building a)	28,519 c)			37,486 c)			37,486 c)
Equipment b)	24,590 c)			29,203 c)			29,203 c)
Maintenance and repairs							
Building d)	2,800			2,800			2,800
Equipment e)	3,300			3,300			3,300
Administration f)	16,600			16,600			16,600
Interest on working capital g)	1,280			1,920			1,920
Other h)	13,000			13,000			13,000
Sub-total	90,089			104,309			104,309
Variable costs on the basis of different degrees of utilization of capacity (per cent)	25	50	75	25	50	75	50
Power i)	6,000	12,000	18,000	6,000	12,000	18,000	60,000
Water and auxiliary materials j)	500	1,000	1,500	500	1,000	1,500	3,000
Office expenses k)	1,500	3,000	4,500	1,500	3,000	4,500	3,000
Unforseen expenses	1,200	2,400	3,600	1,200	2,400	3,600	2,400
Sub-total	9,200	18,400	27,600	9,200	18,400	27,600	68,400
Total operating costs	99,289	108,489	117,689	113,509	122,309	131,909	172,709
Annual ton/month storage l)	9,000	18,000	27,000	9,000	18,000	27,000	18,000
Cost of storage per ton/month	11.03	6.03	4.36	12.61	6.79	4.89	9.59

a) Capital outlay U.S. $280,000, amortization 20 years.

b) Capital outlay U.S. $165,000, amortization 10 years.

c) Capital recovery (8 per cent/20 years 0.1019, 8 per cent/10 years 0.1490
factor: (12 per cent/20 years 0.1339, 12 per cent/10 years 0.1770.

d) One per cent on building costs.

e) Two per cent on equipment costs.

f) One-third manager's salary U.S. $1,640, one accountant's salary U.S. $3,000, one mechanic's salary U.S. $3,000, one store keeper's salary U.S. $3,000, two workmen U.S. $4,320, one secretary U.S. $1,640.

g) Based on U.S. $16,000.

h) Taxes, insurance and miscellaneous.

i) Based on a power consumption of about 10 kw per m³/month.

j) Assumed water consumption of about 1,000 m³/month at a price of U.S. $0.033 per m³, other expenses: lubricating oils, refrigerants, brine, cleaning, disinfecting materials.

k) Telephone, travel, miscellaneous.

l) It is assumed that 3,000 tons of commodities can be stored.

conditions, it is generally desired that the capacity of a multi-commodity cold store is used at least up to 60 or 70 per cent; otherwise the storage costs per ton and month would be too high and storage would not be worthwhile.

In developing countries, the costs of cold storage are often higher than in developed countries because of higher capital, maintenance and power costs. The capital costs are higher because of sometimes more expensive construction and transport, and of higher interest rates charged for borrowed capital. Maintenance is often more expensive since a bigger stock of spare parts or even a complete compressor as a standby unit has to be kept in reserve. Energy costs are sometimes three to four or even five times more than in developed countries. Often an electric generator has to be installed to ensure a continuous supply of electricity. Assuming that the electricity would cost U.S. $0.10 per kw and that the interest rate on capital would amount to 12 per cent, the approximate operating costs of the 10,000 cubic meter cold store at 50 per cent of its capacity would amount to about U.S. $173,000 against an amount of U.S. $108,000 if the cost of the electricity was U.S. $0.02 per kw and the rate of interest, 8 per cent. (See Table I).

To obtain maximum utilization of cold storage capacity the fixing of fees and the location of cold stores are important. The demand for cold storage space fluctuates considerably from year to year and season to season. In order to attract volume also during the off season, fees could be reduced during this period and increased during the flush season. It is often necessary to charge below cost rental at the beginning of a cold store's operation in order to attract business. Thus it is advisable to operate with flexible fees according to the demand situation for cold storage space. In varying cold store fees the price elasticity of demand for cold storage space has to be taken into account in order to make maximum use of the available cold storage space. Privately owned cold stores are often more flexible in this respect than those controlled by governments or municipalities.

In addition to the operating costs of cold storage space, loss of weight and quality occuring during the storage period, and the costs of interest on the capital invested in the stored products, have to be taken into consideration. These cost items are often important, particularly where capital costs are high and should not be neglected. The loss of weight of, for instance, meat during a storage period of six months is often up to 4 per cent; in addition, there is a price difference between frozen and fresh meat. Traders and consumers in many markets value frozen beef 20 to 30 per per cent lower than fresh beef. Losses of weight and quality occur also during the storage of fresh fruit and vegetables, mainly due to respiration during storage. It is estimated that losses occuring during storage of apples can sometimes be valued about as high as the rental cost for storage space.

2. Demand for stored products when offered for sale

The benefits to be derived from a cold storage program are reduction of losses and of short-term and seasonal supply fluctuations, which will lead to a more stable market. In order to assess the demand for cold storage space, it must be determined what commodities will be stored[1] in what quantities, and for what period of time. This requires a thorough market study on the demand for stored products, and particularly on whether the stored products can be sold at a price high enough to cover the additional storage costs.

Two storage periods could be considered:

a. storage of perishables in refrigerated stores over a number of days to a maximum of a few weeks, to even out short-term, daily or weekly fluctuations of supply.
b. storage of perishables in cold stores over a number of months, to even out seasonal fluctuations of supply.

The first type of storage is applied primarily at terminal markets. This can be of particular importance in developing countries where it is difficult to achieve an even and continuous flow of products because of inadequate transport facilities or an inefficient marketing system. There is often a sharp fall in prices of perishables towards the end of the market day because it is feared that the products will deteriorate if kept, since there is no adequate storage space. In this case only a small percentage of the daily or weekly market supply needs to be stored until the next market day in order to stabilize the market of perishables and reduced losses. To determine the demand for cold storage space in this case the extent of the short-term fluctuations of market supply and prices and the price of elasticity of demand have to be analyzed. After the extent of the "carry overs" have been investigated, it must be determined what temperatures are needed to keep losses to a minimum, which has to be considered in relation to the costs of the short-term storage. In developed countries temperatures of 0° to 6°C (32° to 43°F) are often used for short-term storage; this might not apply to fruit and vegetables grown under tropical temperature which are to be stored only for a few hours or days. Temperatures of 15° to 20° C (59° to 68°F) might already be sufficient to reduce deterioration which would otherwise increase if the product were kept under tropical temperatures of 30° to 40°C (86° to 104°F).

If cold storage of several months is envisaged in order to even out seasonal supply and price fluctuations, it must be determined for what length of time the commodity can be stored, and what temperature and humidity conditions are needed to prevent deterioration. In the Annex the approximate storage periods for fruit and vegetables are given. It must be stressed, however, that the data given would vary considerably according to variety, quality, and maturity stage, so that some experimental work should be carried out on the suitability of a particular type of fruit or vegetable for cold storage before a cold storage program is implemented.

After it has been determined that the storage of a product is technically feasible for a longer period, it must be ascertained what period of time would be the most appropriate from the marketing point of view: one, two, three, four months or even more. An analysis of the seasonal price pattern of the relevant product on the basis of price records of a number of years can help to assess the future demand for stored products.

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[1] In estimating the capacity of a cold store the following approximate storage density can be assumed: potatoes (bags) 2.7 m3/ton, potatoes (bulk) 2.0 m3/ton, frozen meat 4.0 m3/ton, chilled beef 6-7 m3/ton, frozen fish fillets 3.5 m3/ton, tuna fish 5.0 m3/ton, apples 5.0 m3/ton.

Other factors such as the number of consumers, their level of income, the price elasticity of demand, the supply of the relevant products from other sources and their substitutes have to be taken into consideration in order to assess the effective demand for cold products. Since a cold storage program is planned for a number of years the likely future trend of these factors must be taken into account. If it is likely that the population and its purchasing power in a certain area will increase considerably, while there are no prospects that the supply of products with which the cold stored products have to compete on the market will be increased, for instance, by imports from other areas, then the market conditions for cold stored products are favorable. It is essential to have an idea of the price elasticity of demand for cold stored products, i.e., the extent to which the price will fall when there is a certain increase of supply.

The following two examples give an idea of the kind of study which might be useful. In a West European country, the agricultural producers raised the question whether the seasonal price fluctuations of cattle prices could be reduced by storing meat in cold stores from the flush season to the off season. An analysis of the price records of the preceding years showed that the normal increase of beef prices from November, the month showing the lowest price. to April, showing the highest seasonal price, was approximately U.S. $100 per ton. The costs of freezing and storage for six months were calculated as follows:

	U.S. $ per ton
Freezing of meat	23.00
Costs of storage for 6 months [1]	30.00
Interest on capital invested in stored product [2]	31.50
Loss of weight within 6 months [3]	36.00
Total:	120.50

In addition to the cost of storage of U.S. $120.50 per ton, the price differential between fresh and frozen beef, which amounted to in this case from 20 to 30 per cent, had to be taken into account, bringing the total costs of cold storage of beef up to about U.S. $300 per ton against a price difference between the flush and the off season of only U.S. $100 per ton. Under these conditions there was no scope for an economic cold storage program for beef. There were, however, alternative methods to even out seasonal price supply fluctuations which were cheaper, and are discussed later.

An example which shows the economic feasibility of cold storage for several months is apple storage in many countries in the temperate zone. In a Central European country, for instance, the price difference of a certain variety and quality of apples between the time of harvest and the scarce period was U.S. $60. The cost of cold storage for six months under normal and controlled atmosphere storage were as follows:

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[1] Including handling, loading and unloading costs.
[2] Seven per cent on a meat price of U.S. $900 per ton.
[3] Estimated 4 per cent as average, assumed meat price of U.S. $900 per ton.

	Refrigerated store	Controlled atmosphere storage
	.... U. S.	$ per ton ....
Storage costs	22.00	27.00
Storage losses [1]	26.00	17.70
Rent of crates	4.2	4.2
Interest (5 per cent)	3.1	3.1
	55.3	52.0

The costs of storage of U.S. $52 to U.S. $55 per ton are well covered by the additional price of U.S. $60 per ton when the apples are sold in spring time.

3. **Costs/benefits of alternative methods to reduce seasonal and short-term supply and price fluctuations other than by refrigerated storage.**

The purpose of refrigerated storage is to reduce physical losses and supply and price fluctuations of perishables. There are, however, many ways and means of reaching the same objective other than by refrigerated storage. Therefore, when a cold storage program is envisaged the technical and economic feasibility of these alternatives must be studied before it is implemented. The failure of some refrigeration programs is due in particular to the negligence of these alternatives.

When cold storage of livestock products is planned to even out seasonal price fluctuations, the possibilities of reaching a more even market supply of these products by changing the seasonal pattern of production must be investigated. Very often it has proved that the introduction of an adequate storage program for feed or of appropriate pasture management which allows livestock production to continue also during the season when feed supply is short, is cheaper than cold storage of meat, butter or eggs. A striking example is the introduction of modern methods of egg production in Western Europe which made it possible to maintain a more or less continuous market supply. While it was common practice in this region 30 years ago to store eggs to even out seasonal fluctuations, there is now nearly no demand for egg storing since the seasonal pattern of egg production has been adjusted to the market demand. Similar trends can be observed concerning pigs, poultry and beef. With regard to fruit and vegetables the introduction of new varieties of earlier or later maturity, of irrigation to extend the growing season, of zoning of production areas with different climatic seasons can contribute considerably to a reduction of supply fluctuations. The organization of fruit and vegetable production and marketing, for instance, in a mountainous area with a different harvesting time is sometimes cheaper than investment in cold storage. Finally, other forms of conservation such as canning, curing, dehydration and fermentation should be considered. Since these methods change the quality of the product, the market demand for these processed products must be investigated, in addition to a comparison of costs.

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[1] Wright and quality loss based on average price of apples of U. S. $120 per ton.

From surveys conducted in a number of tropical countries on the use of refrigerated storage, it seems that refrigerated storage of potatoes, often seed potatoes, onions and carrots, is under certain conditions economically feasible. In India, for instance refrigerated storage capacity for potatoes has increased considerably and in 1960 reached about 70,000 tons. Potatoes are stored from about February, March, April to September at a cost of about U.S. $20 per ton and season without taking into account the loss of weight which is estimated at about 7 per cent. [1] Seasonal storage of meat, however, is seldom practised since it is too expensive, and partly also because of the reluctance of consumers to buy frozen meat.

Concerning short-term refrigerated storage of a few days or a week to even out short-term supply fluctuations at terminal markets, the costs of improving marketing organization should be compared with the refrigerated storage costs. The introduction of proper transport facilities and packing materials and a price and market information service which would assist producers and traders to meet better the daily market demand was found, in some instances, to be cheaper than refrigerated storage. [2]

Investment in refrigerated storage for meat in connection with slaughterhouses is often recommended in developing countries without carefully studying the need for the refrigerated storage. The storage of beef carcasses after slaughtering in a cold store at temperatures of about 0^0 to 4^oC (30^o to 32^oF) for a number of days up to two to three weeks is common practised in many developed countries. The purpose is to tenderize beef (large parts of which are often consumed as grilled beef) to store it for a few days or weeks for processing purposes or to even out short-term supply fluctuations. To determine the necessity for a refrigerated meat store it must be ascertained whether there is a demand for tender meat and whether short-term fluctuations could be reduced by other methods, for instance, the organization of a holding ground where sufficient livestock to meet the demand of about one week's consumption could be stored. Beef is consumed in many developing countries in the form of stewed beef and therefore the demand for refrigerated space for tenderizing beef is limited. Concerning storage to even out short-term fluctuations, it has been found in those areas where land and fodder is cheap that storage of live animals was less expensive than storing meat in refrigerated stores. There may be, however, more need for small cold chambers and household refrigerators in retail markets and shops in order to store these quantities of meat which could not be sold on the day the animal was slaughtered and must be stored for the next day. It seems that the demand in this case would be for smaller units or refrigerated chambers (up to 25 m^3).[3]

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[1] Government of Bihar, Directrate of Agriculture. Report on the survey of cold storages in Bihar, 1960.

[2] FAO, Report to the Government of Kuwait on marketing of fresh fruit and vegetables in Kuwait, Rome, 1964.

[3] Where there is cystercosis freezing or curing facilities are needed to freeze or cure infested carcasses.

ANNEX

Approximate periods for which fruits and vegetables can be held in refrigerated stores [a]

Commodity	Storage Period	Temperature Recommended	
		°C	°F
A. Storable for several months			
FRUITS			
Apples	2 to 8 months	-1 to 4	30 to 39
Grapes	1 to 6 "	-1 to 0	30 to 32
Lemons, green	1 to 4 "	11 to 14.5	53 to 58
Limes	1.5 to 2 "	9 to 10	48 to 50
Oranges	1 to 6 "	2 to 7	36 to 45
Pears	1 to 6 "	-1 to 1	30 to 40
Pomegranates	2 to 4 "	1 to 2.5	34 to 36
VEGETABLES			
Beets	1 to 3 "	0	32
Cabbages	3 to 4 "	0	32
Carrots	4 to 5 "	0	32
Garlic	6 to 8 "	0	32
Horseradish	10 to 12 "	-1 to 2	30 to 32
Manioc	6 "	0 to 2	32 to 36
Onions	6 to 8 "	0	32
Potatoes, ware	4 to 8 "	4.5 to 10	40 to 50
Potatoes, seeds	5 to 8 "	2 to 7	36 to 45
Sweet Potatoes	4 to 6 "	13 to 15	55 to 60
B. Storable for about one month and less			
FRUITS			
Apricots	2 to 4 weeks	-1 to 0	30 to 32
Avocados	2 to 4 "	5 to 10	41 to 50
Bananas, green	10 to 20 days	11.5 to 14.5	53 to 58
Bananas, colored	5 to 10 "	14 to 16	57 to 60
Cherries	1 to 4 weeks	-1 to 0	30 to 32
Figs (fresh)	7 to 14 days	-1 to 0	30 to 32
Mangoes	2 to 5 weeks	10	50
Papaya	2 to 5 "	10	50
Peaches	2 to 4 "	0	31 to 32
Pineapples, green	2 to 4 "	10	50

Commodity Storage Period Temperature Recommended
°C °F

FRUITS				
Pineapples, ripe	2 to 4	weeks	7	45
Plums	2 to 4	"	0.5 to 1	32 to 34
Raspberries	5 to 7	days	0	31 to 32
Strawberries	7 to 10	"	0	31 to 32
VEGETABLES				
Artichokes	30	days	0	32
Asparagus	3 to 4	weeks	0	32
Beans	2 to 4	"	0 to 6	32 to 43
Cauliflowers	2 to 3	"	0	32
Cucumbers	1 to 2	"	11.5	53
Eggplants	10	days	7 to 10	45 to 50
Green peas	1 to 3	weeks	0.5 to 0	31 to 32
Lettuce	1 to 3	"	0	32
Mushrooms	3 to 5	days	0	32
Spinach	10 to 14	"	0	32
Tomatoes, ripe	8 to 12	"	?	50
Tomatoes, mature green	2 to 6	weeks	?	55 to 70
Watermelons	2 to 3	"	2 to 4	36 to 39

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a These data have to be considered only as approximate, since there are great variations concerning suitability for storage depending on the variety, maturity stage and quality of produce.

Sources: International Institute of Refrigeration, Refrigeration techniques in developing countries, Provisional Edition, Paris, 1963. USDA, the Commercial storage of fruits, vegetables and florist and nursery stocks, Washington, 1954.

MARKETING RESEARCH, METHODOLOGY AND TECHNIQUES

Filemon T. Berba
Consultant, Management Service Division
Sycip, Gorres, Velayo & Co.

Marketing Research: Definition and Functions

Marketing research may be defined as the systematic, objective, and comprehensive collection and analysis of data relevant to problems encountered in the performance of the marketing function.

The need for and the development of the specialized field known as marketing research can be best understood in reference to the evolution of the marketing function itself.

Whether we realize it or not, we who are present here owe the positions we now occupy to that historical event nearly two centuries ago, which Arnold Toynbee has appropriately called the Industrial Revolution. That the mechanization of production did not give birth to ill consequences as well as its more spectacular benefits is debatable; but it is not for us to discuss here. Suffice it to say that mass production has likewise generated a host of problems heretofore unencountered a giant among which is the consequent problem of mass distribution.

To appreciate the magnitude of his problem, let us imagine a businessman in the pre-industrial era. For the sake of simplicity, let us take the classic example of the shoemaker. How would a typical shoemaker of the early 1700's have operated? He would manufacture shoes one at a time with his hands and the help of a few unsophisticated tools of his trade. Furthermore, before he did any manufacturing, except perhaps for a number of shoes he has on his display window (an early form of advertising his wares), he would wait for the customer to come to his shop. The customer would then tell him exactly the kind of shoes he would like to wear, the style he prefers, the color he wants, the specific type of leather he desires. Our shoemaker would then take his measurements and proceed to manufacture the pair of shoes, custom-made, tailored to the specific requirements of that particular customer. Our pre-industrial manufacturer, in other words, had direct contact with each of his customers. Marketing was no problem because it preceded production. He knew what his customer wants and he made each pair of shoes according to the express requirements of each customer. He likewise knew how many shoes to make simply because he made as many as were actually ordered. Transportation was no problem because his customers came to him themselves. Our pre-industrial manufacturer limited his marketing to the geographical area within which he operated.

With the advent of mass production, the manufacturer no longer enjoyed a direct contact with his consumers. He began to produce goods not only for people living within the vicinity of his shop but to customers from places he has perhaps never been to himself. Furthermore, he no longer waited for his customers to approach him before making shoes for them. Some of the functions of production and marketing were reversed in time sequence. Our shoemaker now manufactured thousands — even millions — of shoes without any definite assurance that each of these shoes would be sold. He found it necessary to somehow determine beforehand how many of each size each kind of leather, each color and each style of shoes to make. And good or bad, he had to live with the consequences of his forecast however crude it might have been. In a real sense, our manufacturer found himself subject to the mercy of thousands of consumers, each choosing between his shoes and those of his competitors, the joint effect of whose independent action determined the success or failure of his business. Our manufacturer now had to contend with consumers' wants, whims, and caprice, competitors' prices, and a host of other factors his pre-industrial counterpart never found occasion to bother about.

All these problems — and many others we have not mentioned — can be traced in part to the absence of direct contact and communication between producer and consumer. A gap in time and place now exists between the manufacturer and his customer. An essential function of marketing is to bridge this gap between these two economic agents. Marketing must see to it that the right quantities of the right products are brought to the right people, at the right time, place and price.

The need for bridging the communications gap has given birth to the emphasis upon advertising and marketing research as specialized functions of marketing. It is through advertising that the manufacturer communicates to the consumers. On the other hand, it is through marketing research that the consumers, as it were, communicate their wants, desires, and preferences to the manufacturer. It is through marketing research that we attempt to find out and measures the quantitative and the qualitative aspect of consumer wants. It is through marketing research that we learn how many shoes, of what dimensions, of which styles, colors, etc., at what price consumers are willing to buy.

The marketing executive requires facts regarding the market in order to make his decisions. The larger the company, the more remote it is from its final consumers, the more necessary such facts are likely to be. It is the task of marketing research to secure these essential facts for the marketing manager. As an auxiliary unit within the marketing organization, its purpose is to help all marketing executives in the efficient performance of their respective functions (whether it be in the line of advertising, distribution, or sales). Help to these line functions can be extended in either two ways: by developing standards to control the continuing market operation and by providing facts for problem-solving in new situations.

As a staff function, however, marketing research has no line authority except over the execution of its own activities. The main responsibility is still retained by the line personnel who are directly accountable for the success or failure of their respective operations, be it sales or distribution. It is important to note that research can never go beyond reducing the number of alternatives feasible and minimizing the uncertainty surrounding the decision. Decisions will still have to be made, and the responsibility lies with the marketing line executive.

Applications of Marketing Research

Marketing research, used properly, is an important tool for the judicious management of the marketing function. Among its most practical and important applications are:

1. Planning

a. **Assessing market opportunities.** This is important not only for a company contemplating to enter a market but for companies as well who have long been engaged in the marketing of a particular product to enable its management to appraise its performance, identify problem areas and continually adjust company operations to the requirements of the market.

- — Estimating the market potential (the quantity of a particular product that could be sold at the specific period of time).
- — Estimating level of present demand and the factors contributing to its magnitude.
- — Market trend studies taking into account the factors influencing the trend.
- — Sales forecasting, which predicts the company's share of expected effective demand.

b. **Product studies**

- — Opportunities for new products.
- — Developing and testing new products.
- — Determining product preference.
- — Testing package design; color testing.

c. **Consumer studies,** identify the consumers of a particular product and their characteristics which influence their patronage of a product.

d. **Pricing**

e. **Distribution studies,** where to locate a warehouse, its size, and facilities.

2. Organization

a. Determination of sales territories includes an evaluation of potential and present demand in the area, time required to travel the area with the desired frequency of coverage, concentration of population, accessibility to transportation, cost of maintaining the salesman, etc.

b. Sales analysis can be performed with the aid of the research department in the sifting of sales data according to meaningful breakdowns to highlight critical trends and conditions.

c. Appraisal of salesmen's performances includes a study of each salesmen's volume in relation to quota, ability to sell items with high profit margins and to cultivate potential, activity in calls made, expenses, etc.

d. Selection of the proper channels of distribution.

3. Evaluation and control of the marketing effort

a. Assessing market position. The marketing executive seeks to improve or maintain the company's share of the market. Particular attention is required in this area when the brand-switching behavior of consumers is volatile.

b. Rating of each salesman, territory or product against established standards of sales performance.

c. Advertising research

— Media research helps direct advertising expenditures to most effective media.

— Measurement of advertising effectiveness assures that advertising expenditures are justified by tangible returns.

d. Distribution cost analysis ensures maximum returns per unit of marketing expenditures and effort spent.

— Profitability by product, customer, territory.

— Appraisal of opportunity to add to product line.

— Assessing proposal to drop a product.

— Controlling costs of distribution, cost of performing each of the marketing functions.

Methodology

Now that we have a brief idea of what marketing research is about and a few of its branches of application, it is time to turn our attention from the nature to the method of conducting a marketing research project.

We earlier defined marketing research as the systematic, objective and comprehensive collection and analysis of data relevant to problems encountered in the performance of the marketing function. An important objective in the above definition is the term systematic, which implies the necessity of a carefully sequenced step-by-step approach. This discussion will introduce us to the methodology of marketing research. To have a complete and detailed understanding of how marketing research activities are carried on, we must be acquainted with the techniques that the market researcher can draw upon.

The relationship between the methodological steps and techniques employed in a marketing research project is much the same as in constructing a house. In each case, it is necessary first to develop a carefully detailed and complete plan. There are then available, in each case, specific skills and basic techniques required in the execution of the plan. The builder employs the services of craftsmen such as carpenters, bricklayers, and plumbers. The researchman relies on such techniques as surveys, consumer panels, store audits, and sales analysis. Bricklayers are used only if the plan calls for a brick house. If the house is entirely of frame construction, no bricklayers are needed and none are used. Similarly, the market researcher disregards many basic techniques in dealing with the specific research problem simply because the nature of the problem does not require them.

The methodology or sequence of activities underlying the solution of typical marketing research problem is as follows:

1. **Definition of the problem.** If solely for the reason that it is the initial step in the solution of any research problem, defining its dimensions becomes the most crucial stage in arriving at a solution. Research being a cumulative process, each stage builds up on preceding stages and therefore can only be as valid as the activities which precede it on time. Shortcomings, weaknesses, omissions, or errors in the problem definition may arouse the occurence of formidable obstacles in the subsequent stages of research.

Problem definition gives the researcher a sense of direction, enabling him to understand the issues that need to be raised, the questions that need to be asked, the data that need to be inspected. It is at this stage that the problem is explored into its component parts that all the possible variables impinging on the problem are delineated, that relationships among these factors are discussed, that alternative possibilities are examined and eliminated, culminating in the formulation of a tentative hypothesis.

2. **Preliminary investigation.** This stage is basically an extension of the problem definition. Earlier, the market researcher will have attempted to explode the problem with a minimum amount of information. Prematurely exhausting the researcher with information at the initial stage of problem definition tends to restrict both his imagination as well as the objectivity he enjoys as an "outsider" to the problem.

In the preliminary investigation, the researcher turns to resources within and outside the company in search of new ideas, new factors, new hypotheses through interviews with company executives involved in the problem at hand, the examination of company records, the investigation of industry or competitive sources of information, and the inspection of published data or similar studies in the past, the researcher becomes aware of existing information, the form they are in, their accessibility, and the usefulness of these data in arriving at a final plan and formulation of the research problem.

The importance of the problem definition and the preliminary investigation in the research process cannot be over-emphasized, there is nothing more frustrating than arriving at the right answers to the wrong questions.

3. **The selection and employment of appropriate data collection instruments.** Having defined the problem and the precise information required for its solution, the researcher then selects from the variety of techniques developed to solve marketing problems that which, in his opinion, would yield the necessary data at the least possible cost and at the time they are required. Execution then follows the selection and design of the data collection instrument.

If the nature of the problem so dictates or if the physical resources, manpower, or specialized skills are lacking from the company organization, the researcher may likewise recommend the services of an outside consultant or research agency equipped with the facilities to handle the problem.

4. **The processing, analysis and interpretation of research findings.** Gathering relevant mass of information is one thing, putting form and mean-

ing into it is another. The processing, tabulation, analysis and interpretation may be done manually or may require the use of an electronic computer depending on the magnitude and complexity of the study.

Some Techniques Commonly Employed in Marketing Research

1. Statistical approaches (correlation and trend analysis)
2. Market survey
   a. Interviews
   b. Questionaires
3. Department interviews
4. Paired comparison tests
5. Split run techniques
6. Store audits
7. Distribution cost analysis
8. Consumer panels
9. Operations research techniques applicable to marketing research
   a. Linear programming
   b. Brand switching models
   c. Bayesian decision theory
   d. Simulation
   e. PERT/CPM

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LOSSES IN MARKETING OF AGRICULTURAL PRODUCTS

H. J. Mittendorf
Marketing Branch
FAO, Rome

Marketing costs are often largely determined by the amount of losses occuring during the assembly, transport, storage, processing and distribution of agricultural products. Reduction of marketing losses is, therefore, one of the most effective means of reducing marketing costs and margins.

A distinction should be made between the total losses which occur and those which can be prevented at reasonable costs by the application of modern techniques and methods. As we will discuss later there are economic limitations which hinder the prevention of all losses. We can distinguish further between different forms of losses: in quantity, in quality in the form of seed losses and in the form of commercial losses. Losses in quantity are measured mainly in terms of weight. Losses in quality appear in different forms and are often not easy to identify — sometimes they occur only during processing or when the commodities are prepared for meals.

Maize which is dark in color, of course texture and of somewhat rancid flavor due to bad storage is of low quality. Groundnuts containing a percentage of black or discolored nuts are of inferior quality and may command only low prices or may even not be purchased. Seed losses are mostly due to bad storage or harvesting and can cause much financial damage to the grower as the yields would be considerably lower, or he might even have to sow again, if at all feasible. While lower prices for inferior quality might even be acceptable to an individual seller, the indirect implication for the commercial reputation of a certain production area is very damaging. The offer of low quality produce in many parts of the world has spoiled the reputation of many potentially strong producing areas and thus caused considerable losses to developing countries. There are many examples in world agricultural trade where countries do not succeed to expand their trade because of bad harvesting and preparation of agricultural products.

Assessment of Losses

In order to induce growers and traders to take action to reduce losses it is often necessary to identify and measure the losses occuring during the marketing process. This is not always easy. In any investigation on the extent of losses an attempt should be made to obtain representative results. In order to organize a campaign against losses on a wide scale, and for the purpose of setting priorities, it is useful to follow the various commodities from the time of harvesting until they reach the consumer. If such investigations are carried out on a broad scale, some indications will be given of where losses occur, in what form, and to what extent. This information will be sufficient to begin an effective extension program. Considerable losses occur during storage and in order to measure their extent accurately various points have to be considered. Studies on losses in producers stores have been carried out in the past but on a limited scale, and are therefore unlikely to be truly representative. Moreover, it was difficult to measure the losses accurately owing to the fact that farmers draw grain continually from their stores for their own consumption. The measurement of loss of weight is also very difficult as various factors have to be taken into consideration, such as the weight of dust, which may be considerable in the form of powdered produce and of skins, leaves, grass seeds, stones, earth and insects. This should be deducted from the weight of the produce. For instance, 3,000 bags of maize, after two years of storage in Malawi, showed an apparent loss of 7 per cent in weight, which increased to an actual loss of 14 per cent when the dust and insects, with which they had been infected, were removed.

Losses at Different Stages of Marketing

1. **At the farm.** Although hardly any quantitative and representative field studies on losses covering a wide area are available, case studies on a limited scale and observations illustrating the type and extent of losses have been made. Considerable losses often occur through harvesting too early due to shortage of cash or lack of knowledge. Premature harvesting of coconuts for copra, sugar cane, tubers such as cassava, potatoes and groundnuts results in lower oil, sugar or starch content which may also cause difficulties in processing. These losses of potential output can be considerable. It has, for instance, been estimated by an FAO expert working in Thailand that more than 100,000 tons of sugar are lost every year by harvesting unripe cane.

The right time for harvesting is important also for fruit and vegetables. Citrus is sometimes harvested too early, resulting in lower quality due to a high acid content. Soft fruit and highly perishable vegetables are often harvested when they are over-ripe which results in heavy losses during transport.

Rather large losses are occuring often during the traditional way of threshing as for instance, in Pakistan and India, where foodgrains are threshed under the hoofs of the cattle.

2. **During storage.** The losses occuring during storage are manifold and are probably the highest in the whole marketing operation. They are caused by insects, action of molds, bacteria, grain eating birds and rodents and the influence of water and air. Beetles, weevils and moths are the main insect pests which cause extremely high losses of food grains. Some of them, such as the maize weevil begin their attack already several months before harvesting.

Molds develop very often in humid, high rainfall areas when grain is stored at a higher percentage of moisture than 13 to 14 per cent. High moisture and temperature cause biological changes like respiration and germination of seeds, chemical changes such as oxidation and hydrolysis, microbiological spoilage by bacteria and sometimes even combustion. Hydrolysis and oxidation of oil in plant cells results in an increase in acidity, e.g., free fatty acid content which may develop to the extent of rancidity. You are all familiar with the defects of copra caused by micro-organisms when it is not properly dried. These micro-organisms, which penetrate deeply into the endosperm (meat), reduce not only the quality but also the quantity of the copra, as they split the fatty oil into glycerol (glycerine), water and free fatty acids, the latter being sometimes even further broken down. The result of these attacks is discolored and bad smelling oil which is not suitable for human consumption. Such oil has to be refined, which increases its cost while its use is still limited. The presscake of highly infected copra is unsuitable for cattle feed. An example of changes in copra during storage is given in Table 1.

Table 1. **Changes in copra during storage**

Sample	Oil Percentage (dry basis)	Moisture %	**Condition of copra**
	Dry copra		
Start	67.4	4.5	**Clean and white**
End of 2 months	68.4	5.4	**Superficial mold only: color good**
	Undried copra		
Start	64.4	12.1	**Clean and white**
End of 2 months	23.5	64.7	**Slimy, black, mite-ridden; wet and rancid**

Considerable losses are caused by rats and mice. In Liberia, West Africa, it is reported, for instance, that rodents cause an average loss of 10 per cent of all stored paddy. To these losses must be added the loss caused through damaged bags, and loss in weight during handling and transportation. Birds can cause considerable losses, not only before harvesting but also in unprotected stores.

In Table 2, the results of some investigations on losses in Africa are summarized. Considerable quantities of food would be saved if these losses could be reduced. In Central America, for instance, it was estimated that losses due to lack of adequate storage and protection ranged from 25 to 50 per cent of cereals and pulses harvested.

Table 2. Figures of losses of produce at different levels of storage through insect pests (non-experimental) in Africa

Place of Storage	Damaged Grains/Kernels Commodity	Apparent Loss Per Cent	Weight Loss	Storage Period (months)	Major Pest	Country (contributor)
Producer Storage	Beans	38-69	6	6	Bruchids	Uganda
	Beans	3.6		4	Bruchids	N. Rhodesia
		80.7		12	Bruchids	N. Rhodesia
	Cowpeas	13.0		4	Bruchids	N. Rhodesia
		81.6		12	Bruchids	N. Rhodesia
	Maize	0.3-30.6		12	Weevils	Matabeleland
	Maize		20 +	8	Weevils	Ghana
	Maize	30-50		5	Weevils	Dahomey
	Maize	30		5	Weevils	Togoland
	Maize	45-75	20 +	7	Weevils	Uganda
	Maize	90-100 (30 & 40)		12	Weevils & Moths	N. Rhodesia
	Maize (cobs)	5-10		12	Weevils	Ivory Coast
	Millet (finger)	0		12	Weevils	Matabeleland
	Bulruch (or Pearl)	15		12	Weevils	Matabeleland
	Sorghum	0.3-29.0		12	Weevils	Matabeleland
	Sorghum	3-78 (28)	1-26 (8)	9	Weevils	N. Nigeria
	(unthreshed)	2-33 (8)	0-13 (3)	6	Weevils	N. Nigeria
		2-62 (19)	3-13 (7)	14	Weevils	N. Nigeria
	Sorghum	11-88 (34)	6-37 (14)	26	Weevils	N. Nigeria
Trader Storage	Beans	35-44	6	12	Bruchids	Uganda
	Maize	20			Beetles	Togoland
	Maize		5-10	6	Beetles	Uganda
	Maize	16.7	4	3	Beetles	Uganda
	General Produce		10-15	12	Beetles & Moths	Zanzibar
Central Depot Storage	Maize		5-6	11	Weevils & Moths	S. Rhodesia.
	Maize		12-19	24	Weevils & Moths	S. Rhodesia
	Maize	35-38	10	9		Uganda

Methods of Preventing Losses During Storage

1. **Drying.** It is essential that food grains should be dried quickly and efficiently before storage. As already stated, the moisture content of grain for storage has to be reduced to 13 to 14 per cent. There are many simple methods of assessing moisture content, for instance, pressing the grain with the thumb nail, crushing it between the fingers, etc. In recent years, simple portable moisture meters as for instance, the pocket size Japanese moisture meter have been on sale which should be used where larger quantities of cereals of different quality are handled.

The cheapest and simplest method of drying is still the use of a combination of sun and air. This has been practised in a number of different forms for centuries. There is also artificial drying equipment available, oil or electrically heated, which might be justified to buy where sun and air drying is not possible.

2. **Design of stores.** Buildings, godowns or silos should be waterproofed and should not permit the entry of rodents and birds. It must be ensured also that roofs, ceilings and walls are properly insulated against moisture penetration.

3. **Prevention of insect infestation.** Many suitable insecticides are available today at rather low cost to prevent insect infestation (See Table 3). Fumigation can be carried out under gasproof sheets. Moreover commodities in store should be inspected regularly for possible infestation.

If all these preventive measures are carried out properly, losses should not be higher than 2 per cent, which is the maximum allowance made in properly managed stores in developing countries.

Table 3. **Examples of cost of pest control treatment at central storage depots**

Commodity	Country	Treatment	Cost per Bag	Cost per Ton
Maize	N. Rhodesia	Complete pest control program: dusting and spraying with insecticides during storage, fumigation with MeBr at port	2/6d	27/6d
Maize	S. Rhodesia	Complete pest control program based on Grain Marketing Board annual expenditure	1½d	1/4½d
Maize	S. Rhodesia	Fumigation with MeBr (one treatment of a 25,000 bag stock)	0.7d	8d
Maize and Maize Meal	S. Africa	Fumigation with MeBr	2½d	2/3½d
Maize	Kenya	Fumigation with MeBr	1½d-2d	1/4½-1/10d
Groundnuts	N. Rhodesia	Fumigation with MeBr	7d	10/6d (+3/6d handling per ton)
		Fumigation plus post fumigation spraying with 25 per cent malathion W.P., subsequent forthnightly spraying until shipped, plus structural spraying at monthly intervals	8½d	12/-d (+3/6d handling per ton)
Cocoa	Ghana	Nightly fogging with 0.5 per cent pyrethrins Fumigation with MeBr.		2/9d))4/9d 2/-d)

Losses of Perishables

The risk of losses and quality deterioration is particularly great with regard to perishables such as meat, fish, milk, milk products, eggs, fruit and vegetables. A considerable part of these losses can be reduced by the application of more efficient marketing techniques.

Losses occuring during livestock transport can be reduced by speedier transport methods and appropriate feeding and watering of livestock during transport before slaughtering. Speedier transport is also important for other perishables. Often transport during the night, when temperatures are lower, helps considerably in reducing losses of fruit and vegetables. Improved containers and packaging materials for marketing eggs, milk and fruit and vegetables are important means to reduce quality deterioration. Milk containers which are not cleaned sufficiently will cause the milk to become contaminated. Losses due to defective packing, stocking, and pilferage may reach 20 to 40 per cent as observed in certain cases in the Philippines and in Iran.

Refrigerated transport and storage facilities are technically most effective means of reducing losses and there are certainly many places where they could be introduced successfully. Small refrigerated stores at wholesale and retail markets where quantities can be stored which are not sold at the end of the market day are useful means to reduce losses. Temperature controlled transport vehicles for transporting perishables might be most useful. However, in view of the high costs of refrigerated stores and trucks a careful cost/benefits study has to be carried out before a decision is taken on such investments.

It has also to be taken into account that it is often necessary to establish a complete refrigerated chain from the producer to the consumer, since refrigerated commodities deteriorate quickly if exposed for a prolonged period under tropical conditions.

Losses During Processing

The improvement of processing facilities is an important means of increasing food supplies and reducing marketing costs. Processing of agricultural produce in many developing countries is often carried out by primitive methods which have remained unchanged for hundreds of years. Primitive equipment for crushing sugar cane will leave as much as 50 per cent of the sugar in the bagasse, decortication losses of long vegetable fibers frequently amount to 60 per cent; even in the simple process of shelling groundnuts losses can be as high as 10 per cent. The use of obsolete rice milling equipment can lead to a high percentage of broken grains, causing considerable financial loss. Very often, the value of by-products of processing is neglected. In some parts of the developing world no full use is made of blood, horn and bones for feedstuff for livestock. When they are not fully used, relatively small-scale and simple equipment is required to make full use of by-products. Hides and skins are often badly flayed and prepared resulting in considerable financial losses.

Processing is also used to conserve perishable food, i.e., in cans. However, this is a relatively expensive method and should only be applied if it is certain that there will be markets on which these canned commodities can be sold at a price covering the costs of processing. In Ceylon, for instance, the canned products of a government owned and managed factory are sold only at a price lower than the cost requiring considerable government subsidies.

Need for Practical Demonstration and Training

Extensive knowledge and experience exists on how to reduce the losses occuring at different levels of the marketing channel. In many parts of the world research has been carried out on how to reduce storage, transport, processing and distribution losses. The industrial countries have a wealth of knowledge and expertize available on this subject, which is at the disposal of those developing areas which have need of it. Some of the available techniques might need adapting to local conditions, but this should not be too difficult. What is needed, however, is an effective system of disseminating the knowledge to the farmer and trader. This can be done by establishing marketing extension services, which would be partly responsible for demonstrating modern techniques and methods of marketing, i.e., proper packing, storing and processing methods, to the people who need this knowledge.

Economic Aspects

The reduction of losses requires extra efforts in the form of labor and capital which are also urgently needed for other development projects. Therefore, it must be carefully checked whether the additional efforts required would be balanced by higher returns. There are doubtless many cases where higher investments in improved packing, transport, storage and processing would be justified and profitable. But there are already many cases which show that the application of modern techniques has its limitations. For instance, the relatively large losses which occur regularly in low valued fruits and vegetables, such as bananas or lettuce, could without doubt be reduced by applying refrigerated transport and storage facilities. However, if an economic evaluation of the application of these modern techniques is made, it appears that the additional costs involved are not covered by savings through reduced losses. Under these conditions, improved marketing techniques, for example, adjusting the pattern of production and marketing to the pattern of demand, speeding up transport, etc., may result in larger savings than elaborate and expensive technical facilities such as refrigeration. In some cases it has proved more economic to invest in higher production of low valued produce, such as fruit and vegetables, in order to compensate for losses, than to invest in measures to reduce them. These conclusions have been reached also after studies on the application of refrigerated transport of meat, as was discussed earlier when we analyzed the application of refrigerated storage and transport for agricultural perishables.

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DATA ON MARKETING COSTS AND MARGINS TO MEASURE MARKETING EFFICIENCY

H. J. Mittendorf
Marketing Branch
FAO, Rome

Marketing Efficiency

Data on marketing costs and margins are used to measure marketing efficiency. Marketing efficiency is defined as the movement of goods from producers to consumers at the lowest costs consistent with the provision of the services consumers desire. Reductions in the costs of maintaining the standard of service represent clear increases in efficiency. At the same time, additional marketing services that raise the cost of marketing may also represent greater efficiency if consumers value them more than a corresponding saving in cost.

Technical and Economic Efficiency

Two aspects of marketing efficiency may be distinguished: the physical handling of the product, and the economic terms on which the handling takes place. Efficiency in market handling is a matter of procedure, technique and scale of operation. New methods of packing, storing, transporting, loading and unloading, for example, may reduce waste and prevent deterioration in quality. Labor economics at various stages may be achieved by the adoption of new handling methods or the use of machinery. Technological advances in refrigeration, fumigation, maintenance of flavor and consistency may be adopted to improve the quality of the product offered to the consumer and limit handlers' losses. The expression of these physical savings as reductions in money costs depends on the economic environment in which marketing proceeds.

Economic efficiency implies that a firm or an industry is operating on the lowest cost basis feasible with the techniques, skills and knowledge available, and that the benefits of all possible economies are reflected in the prices and margins prevailing in the market. If there is a competitive market the pressure of competition will compel traders to pass on any benefits derived from the introduction of improved methods to producers and consumers.

From the above, it becomes clear that technical and economic efficiency do not always coincide. The application of modern refrigerated transport and storage facilities might physically reduce the losses during the marketing process to a minimum. However, in considering the costs involved in operating the cold chain one can reach the conclusion that the benefits derived from it are in monetary terms much smaller than the costs involved. In these circumstances it can be concluded that the use of refrigeration is efficient technically but not economically, i.e., in monetary terms. Thus, in any study on increasing marketing efficiency considerations must be given to the physical efficiency i.e., the quantitative yields, to the standard of marketing procedures, and to the monetary efficiency. i.e., the ratio of inputs of costs to output of returns for a particular situation.

Calculation of Marketing Margins

The term "marketing margin" refers to the difference in value for equivalent physical quantities of a given commodity between different levels of marketing; in other words, the difference in the price paid and received by any marketing agency. The total marketing margin, therefore, is the difference between the price paid to the producer and the price paid by the final consumer. These charges are either expressed in absolute monetary terms or as percentage of the value of a commodity.

Marketing margins are generally broken down in two different ways:

1. On the basis of specific functions such as local assembly, transport, processing, wholesaling, retailing.

2. According to various cost items such as labor, packaging material, transportation costs, wastage, sales promotion etc.

A common way of expressing marketing margins or the spread between producer and consumer price is "the farmers' share of the consumers' dollar", i.e., the percentage of the farm price in relation to the retail price. This expression might be useful to indicate the magnitude of the cost of marketing services involved in bringing the products from the producer to the consumer; however, it says practically nothing about marketing efficiency. Comparisons of the "farmers' shares" between different countries and even between different regions and areas in one country might often be misleading, since the quality and quantity of services rendered by the various marketing system are not fully evaluated.

In calculating the total costs of marketing margins all costs incurred between the farm and the final consumer should be included. Taxes and subsidies have to be taken into consideration, and should be shown separately.

There are various ways by which marketing margins can be calculated:

1. Margins may be computed by selecting specific lots or truckloads of fruits or any other agricultural commodity, and tracing them through the marketing system. Preliminary investigations would be needed to ensure that these transactions would be representative of the procedure customary in the trade A practical difficulty with this method is that many products, such as wheat and livestock, lose their identity during the course of mass processing operations, making the assignment to individual lots of raw material of appropriate portions of the varying returns for the finished products made from them a difficult and arbitrary task. Due regard must be paid to the yields and losses of the various processing methods and the value of by-products resulting from processing, i.g., livestock products, canning.

2. The gross money sales and purchases of each type of marketing agency and the volume handled can be recorded. The average gross margin is obtained by dividing money sales minus money purchases by the number of volume units handled. By setting up a typical marketing channel and showing the average margins of the successive types of intermediaries active in this channel, the over-all margin is obtained. Finally, the margins of different marketing channels may be combined into an average by

the method of weighing each according to the volume moving through the channel. Some adjustment between the quantities purchased and sold is necessary, because of waste and other physical product losses during the marketing process.

3. Prices can be compared at different levels of marketing. This method depends on the availability of representative and comparable series of prices at each level. Four common forms of distortion must be guarded against. The price quotations used should be representative of the general level of prices to which they refer. The prices used should cover products of comparable description and quality. Allowance should be made for waste and spoilage during handling and processing. Another problem is the lag in time between successive marketing operations.

The relative advantages of these methods depend on the particular objectives in projects designed to ascertain the margins prevailing in different marketing channels, and to cast light on specific cost items. Considerable work is involved in analyzing the accounts of representative enterprises and interviewing handlers throughout the successive marketing phases, and over the various parts of the market area. The third method is usually employed when the main interest is to note the movement of marketing margins in relation to prices and cost indices, and when observations are required on a fairly continuous basis. Frequently, farm and retail price series published regularly can be used as a basis, subject to adjustments as necessary.

Size of Marketing Margins

Margins differ not only between different commodities but also between different places and seasons. It has been generally observed that the largest items in marketing margins are accounted for by retailing and processing, and wages and salaries. The extent of processing involved is a decisive factor in determining total margins. Highly processed cereal products, canned meat or canned fruit and vegetables tend to show the highest margin for processing. The perishability of a product has also a great influence on the extent of the margin. Perishable fruit and vegetables and liquid milk bear relative high transport margins. The margin may also be affected by the seasonality of supply and consumption. Where facilities are used only during a few months of the year, their overhead costs will be relatively high.

Table 1. **Farmer's share of retail costs, U.S.A., Average 1957-59**

	Per cent		Per cent
Butter	72	Oranges	35
Eggs	64	Apples	29
Beef	62	Cabbage	28
Chickens (ready to cook)	56	Peaches (canned)	18
Pork	51	Peas (frozen)	16
Milk (fresh)	43	Bread	16
Sugar	37	Peas (canned)	15

Stability of Marketing Margins

Marketing margins are determined more by the demand and supply of marketing services than by the demand and supply of the particular commodity to be marketed. Therefore, marketing costs are rather stable in the short run and do not fluctuate with the prices of the commodities concerned. This means that farm prices fluctuate relatively more than retail prices.

Table 2. **Changes in retail and farm prices while marketing margins remain constant**

	1st Year	2nd Year	Changes against first year $ per kg	Per cent
Retail price	100	90	-10	-10
Marketing margin	50	50	0	0
Farmer's price	50	40	-10	-20

This shows clearly that if the farmer's share falls proportionately more than the retail price this is no indication of deterioration of marketing efficiency. The more fixed cost elements there are in the margin and the larger its share in relation to the retail price, the more pronounced is the effect on the fluctuation of farm prices.

Long-Term Trends of Marketing Margins

In the developed countries, where information on market margins is available, it has been observed that marketing margins expand in the long run. Increasing consumer demand not only results in greater demand for certain higher valued agricultural commodities but also in better services. There is a general trend towards a greater demand for processed products and ready to eat commodities requiring higher processing, packaging and handling costs, e.g., refrigeration. Consequently, higher marketing costs result. The demand for more marketing services in developed countries is one of the main reasons why marketing margins are sometimes higher in industrialized than in agricultural countries. This increasing trend is also due to the amount of labor used in marketing which cannot be replaced by machinery. Savings through better organization and more efficient marketing methods are often not enough to balance the upward movement of wage rates.

Excess of Marketing Costs and Margins

Excessive marketing costs results either from excessive profits of the middlemen or unnecessarily complicated and inefficient marketing systems. Both cases prevail in the absence of effective competition. Under competitive conditions, the residual profit retained by each middleman is not larger than needed to keep him in business. Excessive profits would draw in new competition which would reduce the marketing margins to a minimum.

There are many reasons for unduly high margins under conditions of limited competitive conditions:

1. The weak bargaining position of the small scale producer, who often lacks accurate market information and appropriate credit sources vis-a-vis a well informed trader;
2. Excessive wholesaling and retailing costs due to inadequate transport, storage and handling facilities which result in waste;
3. Lack of marketing organization and performance due to lack of knowledge;
4. General lack of market, price and quality information;
5. Limited entry to market due to strong groupings of traders; and
6. Administrative inefficiency and maintenance of obsolete legal requirements and public monopolies.

Measures to Reduce Marketing Cost

There are many ways to reduce marketing costs and margins, some of which are indicated below:

1. Organization of an effective price and market information service;
2. Introduction of standardized weights and measures and quality grades;
3. Regulation of markets with the objective of strengthening competition;
4. Promotion of producer and consumer cooperatives, where suitable;
5. Assistance to improve marketing practices with the objective of reducing waste and improving quality;
6. Establishment of permanent training facilities in agricultural marketing; and
7. Organization of effective credit facilities.

Need for Careful Case Studies to Advise on Increasing Marketing Efficiency

In order to advise on marketing improvement in particular cases the usual information on prices and margins is not sufficient. An accurate and detailed appraisal of current performance of the marketing functions and of the techniques used is necessary. Then the cost of alternative marketing systems applying more efficient techniques, often involving reorganization and changes in the traditional marketing organization, has to be studied. In order to demonstrate what is involved in such case studies, the following examples are given:

Example A

In India the question arose by what means the marketing cost of rice could be reduced. There was scope for increasing the outturn of whole grain rice from paddy and reducing losses during storage and distribution. A research team, including an economist, engineer and rice milling expert, studied first in detail the technical possibilities of achieving the highest output of unbroken high quality rice by using modern storage and milling techniques. The following alternative combinations were evaluated in physical and economic terms (see Table 3).

CASE STUDY A

Table 3. Storage and processing costs for four alternative paddy rice operations — Raipur District, India

	Alternatives			
	I*	II	III	IV
	Typical 1-ton mill	3-ton mill 1000 T. flat storage	3-ton mill 1000 T. flat S 1000 T. Silo S storage	3-ton mill 1000 T. flat 7000 T. Silo storage
Capital Cost (US$)				
A. Storage godowns				
B. Milling equipment and building				
Operating Cost — (US$)/Ton				
A. Processing 21,600 tons paddy				
1. Per ton paddy input		1.57	1.74	4.37
2. Per ton rice output		2.42	2.63	5.19
B. Processing 14,400 tons paddy				
1. Per ton paddy input		1.90	2.28	5.19
2. Per ton rice output		2.93	3.45	7.41
C. Processing 1,750 tons paddy				
1. Per ton paddy input	7.62			
2. Per ton rice output	12.71			
Outturn of Rice— in quantity				
Alternative I = 100	100	111	114	122
Break even price of rice from 1 ton paddy (price) Rs 276 per ton** (US$ per ton)				
(a) Processing 21,600 tons paddy		88.8	87.8	86.5
(b) Processing 14,400 tons paddy		89.7	88.6	87.8
(c) Processing 1,750 tons paddy	110.04			
Actual Market Value	128.10	143.6	147.0	154.6

* Capital requirements are current costs of a new mill of this capacity with limited working storage. Operating costs represent actual market margins as reported in Rice Economy of India, 1961 and as checked with Raipur miller's records. Mill outturn is taken from Miller's records.

** The equation is cost per ton of paddy plus operating cost per ton of paddy input minus value of rice bran (Rs. 8.20) per ton of paddy divided by mill outturn.

Source: The Indian Society of Agricultural Economics. Seminar on Marketing of Agricultural Commodities, Bombay 1965.

Alternative I represents the typical existing 1 ton per hour mill using antiquated equipment and outdated methods of procuring and processing. It has no protective modern storage, operates for 220 eight-hour days per year and processes about 75 per cent row rice and 25 per cent parboiled rice.

Alternatives II, III and IV represent estimates of capital and operating costs based on the use of modern machinery and modern protective storage of paddy. The cost data includes depreciation and interest on investment. About 75 per cent of the paddy would be parboiled and 25 per cent processed as raw rice. Such a modern facility can and should operate 300 twenty-four hours days. The major differences between Alternatives II, III and IV is the amount and kind of protective storage provided at the mill site.

The analysis indicates that compared with Alternative I the proposed Alternatives II, III and IV will increase outturn of edible rice from given inputs of paddy. The gain ranges from 70 to 120 more kilos of rice per metric ton of paddy, depending on the combination of resources and procedures used. Factors contributing to the increased outturn of rice include modern storage and handling, shift in proportion parboiled, mechanical drying and modern milling equipment. The analysis also indicates that the break-even wholesale price for rice is materially lowered by these alternative systems. Thus both physical and monetary ratios would be improved.

Example B

In West Germany the question arose whether transport of livestock or meat from producing to consuming areas was more economical. A careful study was conducted on the marketing costs, including cost of both transport methods, i.e., of live animals vis-a-vis meat, slaughtering costs in consuming areas vis-a-vis producing areas, feeding costs and loss of weight of livestock during transport. A special study was necessary to find out the usual loss of carcass weight i.e., "tissue" shrinkage and "excretory" shrinkage of live animals during transport. It was ascertained in this particular case that the tissue shrinkage in pigs during transport over a distance of 300 kilometers amounted to 2.5 per cent of the carcass weight which could have been saved if the pigs had been slaughtered in the producing area.

In order to reduce marketing costs of livestock it was recommended that the cattle be slaughtered in the producing area and the meat transported to the consuming area. This, however, required considerable additional investments in a cold chain, i.e., a chilling room at the slaughterhouse to be built in the producing area, refrigerated transport facilities and a cold store in the consuming area.

An accurate evaluation of the two alternative systems is given in Table 4 of Case Study B.

Case Study B

Table 4. Comparison of marketing costs of live pigs and meat over a distance of 400 km. in Western Germany

Cost Item	Cost of traditional method of marketing of live pigs	Cost of alternative system of marketing and transporting carcasses
	(DM per 100 kg live weight in the production area)	
I. Transport and sales costs		
1. Assembly	1.20	1.20
2. Weighing	0.45	0.45
3. Freight	7.11	5.14
4. Insurance	0.80	0.80
5. Commission fee of trader in producing area	4.19	3.70
6. Feeding costs	2.10	—
7. Fee on livestock market or wholesale meat market	1.40	1.20
8. Other expenses	2.70	—
9. Fee of agent at market	3.60	3.60
10. Value of weight loss	7.20	
	30.75	16.09
II. Cost of slaughtering [1]	11.00	8.40
III. Total costs	41.75	24.49

[1] Costs of slaughtering were found to be cheaper in the producing areas than in the consuming centers.

The economic appraisal shows that the additional cost of refrigeration for meat marketing was fully justified and was more than offset by the reduction of losses of meat occuring during tranrport of live animals.

Example C

The introduction of modern techniques in developing countries has to be carefully studied from the economic point of view. This refers particularly to the application of refrigeration in developing countries. In Uganda, East Africa, the same question as analyzed in Case study B was studied, namely, the replacement of the traditional marketing system of transporting livestock by a system of transporting meat. Due to the high costs of refrigeration and the relatively low cost of meat in this country, it was found that it would not be justified from the economic point of view to change over from the present livestock marketing system to a technically more modern meat marketing system. In fact, the cost of transporting meat was found to be nearly twice as high as transport of livestock. (See Table 5).

These three examples clearly demonstrate that the economics of alternative marketing methods must be appraised in each individual case.

Case Study C

Table 5. Comparison of marketing costs of cattle and beef over a distance of 450 miles in the specific area in Uganda, 1965

Costs item	Costs of traditional marketing of cattle	Costs of alternative system of marketing and transporting beef carcasses
	(Shillings per head carcass)	
Assembly costs	10.00	10.00
Slaughtering costs		
in producing area	—	36.00
in consuming area	[1]	—
Transport costs		
of livestock	24.50	—
of meat	—	14.13
Shrinkage during transport		
of livestock (5 per cent)	15.00	—
of meat (2 per cent)	—	6.00
Wholesaling costs of meat	6.00	30.00
	55.50	96.13

[1] Covered by value of by-products.

* * *

TRAINING FOR EFFICIENT MARKETING

F. A. Shah
FAO Regional Marketing Specialist
Asia and the Far East

Introduction

Lack of trained personnel and facilities for training, especially in Asia and the Far East Region, constitute a main obstacle in effecting improvement in agricultural marketing. Many policy-makers, advisers, administrators and the directing personnel of business enterprises, cooperatives and public institutions concerned in the marketing of farm products would be much better equipped if they had a thorough training in marketing principles and practices. Adequate facilities for training of the type and scope required are not available in most of the countries of this region. In the universities in certain countries in this region, agricultural marketing is included in the curricula, but it constitute only a very small portion of the courses in agricultural economics and is not treated in the detail necessary to make it useful for marketing personnel. The coverage of the subject may also not be adequate. In some countries in this region perhaps there is no teaching of agricultural marketing at the university level.

At present it is difficult to find teaching establishments which offer suitable combination of training courses for marketing, even in most developed countries. Business administration courses are adapted mainly to non-agricultural requirements; agricultural economics and cooperatives are often divorced from marketing management instructions in the technical handling and quality appraisal of agricultural commodities is rarely available in conjunction with them; practical experience of the physical and business operations of marketing is left to the individual to obtain elsewhere if he is able and so inclined.

Regional Technical Meeting on Marketing, 1959

The Technical Meeting on Marketing in Asia and the Far East Region, sponsored jointly by the Food and Agriculture Organization of the United Nations and the ECAFE was held in India during April/May, 1959. The purpose of this meeting was to provide avenue for a general stocktaking and discussion of the relative effectiveness of various marketing improvement programs in the region. It was attended by 31 participants and 3 observers representing 8 Asian countries, by members of both sponsoring organizations and by one special consultant.

The meeting concluded that programs for improving marketing could not be carried out effectively until personnel were trained, and that the most immediate need, therefore, was provision of specialized training in this field. The ultimate goal should be the establishment of institutes in each country so that adequate training in accordance with the particular requirements of that country could be given to the large number of qualified personnel that would be needed. The meeting recommended the following curricula for such institutes:

1. Economics, with special reference to agricultural problems;
2. Agricultural marketing, with special reference to the conditions and need of the region;
3. Marketing management;
4. Marketing of specific commodities of importance in the region;
5. Technical aspects of packing, transport, storage, quality control, grading and standardization, etc;
6. Organization and work of government marketing departments, marketing co-operatives, state trade organization and marketing boards, marketing extension services, market information services, organization of training courses within individual countries;
7. Marketing research with special reference to agricultural products.

Regional Technical Meeting on Marketing Aspects of Implementing Food and Agricultural Price Stabilization Policies, 1963

This meeting was also jointly sponsored by FAO and ECAFE and held in India during February/March, 1963. The purpose of this meeting was to provide for the exchange of experience and to discuss recent changes in agricultural marketing improvement programs in the region. It was attended by 49 participants and experts from 15 Asian countries, including specialists of some international foundations. **Inter alia** this meeting considered the important subject of training the marketing personnel. While endorsing the relevant recommendation of the Marketing Meeting of 1959 it observed that though more courses in agricultural marketing were being provided by universities and cooperative colleges, facilities for regular systematic training in marketing in the region were still inadequate. It was noted with satisfaction, however, that steps were now being initiated in some countries to establish permanent institutions for marketing research and training, e.g., Pakistan, Iran and Korea.

Marketing Training Requirements

Almost every country in the region has undertaken development plans for which a large number of trained personnel would be needed. To enable governments to implement price policies and improve marketing they would require, for example, officers in government marketing and co-operative departments, specialized credit organizations and agricultural banks; quality control inspectors market intelligence reporters and analyzers and market supervisors; marketing extension specialists and field officers; graders and assessors; warehouse superintendents; directors, local managers, buyers and foremen or specialized labor supervisors or marketing enterprises (state, public, board or corporation, co-operatives and private).

Only very tentative numerical estimates of requirements could be made at the 1963 Marketing Meeting. In China (Taiwan), for example, the number of trained marketing personnel needed was estimated at 1,560 for the next ten years; in Ceylon, it was about 1,000 at the managerial level and 50 at the administrative level. In Iran, it was expected that about 2,000 persons of all categories would be trained during the next ten years. According to the Third Five-Year Plan of India, the target was to train 150 senior officers, 700 to 800 market secretaries and superintendents, 1,000 graders and assessors and over 1,000 price intelligence reporters. These estimates did not include the many trained personnel needed to staff private marketing enterprises and help them raise the efficiency of their operations. There was also likely to be a growing demand from various government and government-sponsored organizations for trained marketing managers, etc.

Existing Facilities for Training in the Region

Since 1959, some progress has been made with regard to the training of personnel in agricultural marketing in this region. In many countries, as for example, in Malaysia, India, Indonesia, Iran, Pakistan, the Philippines and Thailand, separate departments for agricultural economics have been set up recently in the universities and colleges of agriculture. In India, agricultural marketing forms a part of the agricultural economics courses taught at the agricultural colleges and of graduate courses in economics and commerce at many universities. At the Punjab University it constitutes a one-year post-graduate certificate course. Special courses in co-operative marketing are organized by the Central Committee on Co-operative Training.

The curricula of the Universities of the Philippines and of Indonesia include courses on agricultural marketing and co-operatives. Some aspects of marketing are included in a rural economics course at the University of Malaya. The programs of the Agricultural Credit and Co-operative Institute in the Philippines and Co-operative College in Malaysia include some marketing.

The Department of Economic Affairs of Kasetsart University, Thailand, provides principles of marketing, advanced agricultural marketing and marketing research courses. There are also marketing courses at Chulalongkorn and Thamasart Universities, and some in-service training arrangements for government staff concerned with agricultural marketing.

Agricultural and co-operative marketing are included in courses at several agricultural colleges and two co-operative colleges in Pakistan. The economics departments of the two agricultural universities established in 1960 have also an interest in agricultural marketing. Specific training as in the grading of wool and hair, for example, was arranged on an ad hoc basis.

In China (Taiwan), three agricultural colleges offer agricultural economics including agricultural marketing. Staff training in grading and packing is arranged by agencies such as the Provincial Food and Commodity Inspection Bureau. Farmers' associations and fruit marketing co-operatives also establish staff training centers and call village meetings to provide guidance on grade and price changes. In Iran, field officers of the Department of Agricultural Economics receive one month of training annually in agricultural marketing. Short marketing and co-operation courses of two to three weeks are also held.

Many of the governments of the region have made arrangements for in-service training. A regular systematic training course for marketing officers was started in India in 1957. There is a one-year course for marketing officers, a five-months' course for market secretaries and superintendents (1958) and a three-month course for graders and assessors (1962). Twenty-five to 30 graduates went through the marketing officers' course which included studies on marketing systems, prices, grades and standards, regulatory measures, transport, packing, storage, etc., marketing extension, and field work on marketing surveys. One hundred and forty six officers had been trained up to 1963; the Third Five-Year Plan envisaged a total of 250. In India, arrangements are also being made for specialized training of price intelligence reporters and supervisors.

In Burma, six-week training classes are held every year for senior executives engaged in the purchase and sale of paddy and rice. In Japan, 24 schools established by the Central Union of Co-operatives offer courses of six to eight months including agricultural marketing. Government inspectors are recruited from among the high school graduates, given one month pre-service training and two years' in-service training under the supervision of inspectors.

FAO's Assistance in Training in Marketing: Establishment of Permanent Institute for Training, Research and Demonstration

The 1959 Marketing Meeting recognized the need for the establishment of permanent institutes in each country so that adequate training in accordance with the particular requirements of that country could be given to the large number of qualified personnel that would be needed. Accordingly it recommended the establishment of such institutes. The latter might also provide services such as a clearing house for information relating to marketing, carrying out marketing investigations, initiating the construction of model marketing facilities, operating pilot development projects, developing standard grades and providing an independent quality testing service. Further recommendations were made to seek financial assistance from the United Nations Special Fund for the establishments of such institutes.

FAO has already successfully assisted in the establishment of a regional agricultural marketing institute at Bogota, Columbia (1963) for the benefit of the Latin American countries and a national marketing research and training institute in Jordan, Middle East. The establishment of similar institutes with the help of Special Fund are under consideration in a number of other countries such as Pakistan, Korea, Iran, Turkey, Nigeria and East Africa.

The Latin American Agricultural Marketing Institute (ILMA)

On 10 January 1963 the Instituto Latinoamericano de Mercadeo Agricola, in short ILMA, was officially constituted. Although the duration of Special Fund assistance is to be limited to four years from 1 January 1963, ILMA's by-laws clearly state that "sponsoring agencies agreed to organize the Institute as a permanent non-profit organization." FAO was designated as the executing agency and the Instituto Nacional de Abastecimientos (INA), the official agricultural price support agency, became the principal co-operating agency in representing the Colombian Government.

Financing Arrangements

ILMA became affiliated with the National University of Colombia and four Colombian agencies undertook to support it during the four-year period of the Special Fund project. INA agreed to contribute a total of about 2.97 million Colombian pesos and one half of the U.S. $2,620 payable to the Special Fund as a cover for "local operating costs". The National Bank, the official Agricultural Credit Bank and the National Coffee Growers Federation each undertook to contribute a little over 1 million pesos (U.S. $100,000) and the sixth part of the Special Fund local operating costs allocation.

Thus, total Colombian cash contributions of about U.S. $600,000 were committed to ILMA by its Colombian sponsoring agencies for the four-year period 1963-1966. If the $82,620 provision for local operating costs and $200,000 rental value of lecture rooms and office space are added, the aggregate Colombian contribution may be valued at about $883,000.

Colombian cash contributions are to be used for providing local administrative staff and services, professional counterpart personnel and services, clerical and other non-professional staff and workers, as well as for purchasing locally-produced equipment and supplies.

The United Nations Special Fund is to contribute a total of $807,900 in four years, for the purpose of providing professional services through 8 international experts, 16 fellowships, equipment and supplies not produced locally, and to cover miscellaneous costs. Provision was made for the raising of additional funds by accepting commercial contracts for research and advisory projects to be executed by ILMA personnel.

Since September 1964, ILMA has had its own permanent building in the National University campus. This was made possible by a grant from the Colombian Ministry of Agriculture and by funds earned by the Institute through commercial research contracts.

Training and Research Programs

ILMA's by-laws state that the Institute should "carry out in collaboration with the National University, FAO and other international Latin American or national institutions, a program for training and research in the marketing of farm produce; offer technical, advisory, information, extension and other services susceptible of improving the domestic, intraregional or international marketing of farm produce, for its own account, that of sponsoring agencies or for others' account, on a commercial contract basis, and carry on any other activity that may be indicated for promoting the above aims".

Training

Two training plans have been made:

1. By agreement with the Faculty of Economics of the National University, students are offered the opportunity to specialize in marketing.
2. Specialized agricultural marketing training is available in ILMA with the co-operation of the faculty and Colombian marketing agencies, at different levels.

a. A course, leading to the title of "agricultural marketing officer" designed for foremen and other personnel whose future function is to carry out and oversee basic marketing operations. The duration of this course from 1965 will be a little over four months. Trainees may be admitted at the discretion of ILMA's Director without special conditions as to educational background. The organization of short extramural courses for agricultural marketing officers and others, as part of the extension program, has also been envisaged.

b. Training for specialists leading to the title of "agricultural marketing technician" for those who seek to be responsible for the operation of marketing facilities and services. The basic course is of one year's duration and of predominantly practical character. Applicants are expected to have reached university entrance level or its equivalent. Over a period of one year, intensive training is given in marketing economics and principles, elements of statistics, bookkeeping, English marketing terminology, and other subjects, as well as specialized training for certain commodity groups.

c. A basic two-year course for prospective "agricultural marketing engineers". Applicants are expected to have completed a three-year course in economics or agronomy at a recognized university. In addition to specialize training for a given commodity groups, the course provides training in advanced economics and marketing; development planning and programming; agricultural marketing research methods; organization and management of private, co-operative and public agricultural marketing enterprises; international trade; and sales methods.

On completion of the basic training, agricultural marketing engineers as well as technicians have to spend a period of at least six months in the service of an agricultural marketing agency or private firm before they are awarded ILMA diplomas.

Research

The research, advisory, information and extension services provided by the Institute are an integral part of its program and a parallel responsibility of ILMA personnel. Promising students have been engaged as research assistants and thus have an opportunity to gain practical experience in research projects under expert supervision. Research assistants with special talents may be granted fellowship for advanced post-graduate training abroad. This group is expected eventually to provide candidates for appointment as senior ILMA staff members.

The services offered by ILMA include:

1. Marketing improvement projects for public and private bodies, including the preparation of feasibility studies in conformity with rules laid down by international financing agencies.

2. Marketing research and promotion work for public and private enterprises.

3. Supply and demand projection.

4. Projects for the establishment and management of agricultural marketing enterprises and facilities, including supply centers, public markets, grain elevators, cold stores, commodity exchanges, auction halls, supermarkets, etc.

5. Organization of market and price information services.

6. Development of grade standards for farm produce.

7. Execution of experimental and pilot projects in marketing.

Extension Activities

Short extension courses were offered for the first time in 1964. During the earlier part of that year ILMA staff lectured on agricultural marketing for co-operatives within the framework of a training course organized by a number of Colombian agencies connected with co-operation.

In August-September, another series of marketing lectures was held by ILMA staff for a group of future loan supervisors contracted by the Caja Agraria, the official Colombian farm credit bank, as part of a program intended to provide a special credit line for small and medium agricultural processing industries. In September, short courses on marketing were held for the Colombian Agrarian Federation. It is intended to expand this program as ILMA's Colombian assistants acquire more marketing knowledge.

Research and Advisory Activities

The first research project entrusted to ILMA was a study of European markets for Uruguayan meat, part of general survey of that country's meat packing industry, carried out by FAO. It was submitted in 1963 and many of its recommendations have already been put into practice.

At the request of the Colombian National Supply Institute (INA), ILMA prepared, in co-operation with the Engineering Department of INA, a study of the feasibility of expanding the Colombian grain storage network.

Also for INA, the Institute prepared at the beginning of 1964 a study on food distribution in the provincial city of Popeyan, and made proposals and plans for the establishment of a supermarket-type fair-price food store.

Since the beginning of 1964, ILMA has been working on a basic study of food supply problems in Colombia. This investigation is the first of its kind ever made in the country. Over 700 producers were interviewed in important production zones, as well as in Bogota, where wholesale and retail dealers, supermarket executives and other marketing agents were interviewed. Uniform data on input factor costs and marketing margins throughout the production and marketing chain were obtained for 13 staple farm products which compete for available agricultural resources in Colombia. The principal reasons for insufficient production levels, shifts in production and relatively high prices for certain commodities observed during the first half of 1964 were identified, and integrated overall and specific agricultural marketing policy measures proposed as a remedy. Several Colombian ILMA assistants with economics degrees obtained in Colombian universities, together with INA personnel, are collaborating with the Institute's international experts in this and other studies.

An important project being carried out by ILMA is the pre-investment study of tropical plantations that INCORA, the Colombian land reform agency, expects to set up in settlement areas. ILMA is advising INCORA on the establishment of a total of 35,000 hectares of such plantations in five widely scattered irrigated and dry land settlement areas. Recommendations on kinds and areas of tropical fruits and nuts must be made for each location, based on a special study of domestic and foreign market capacity. The preparation of plans for fruit processing facilities, installations and equipment, together with recommendations on the distribution system for these products in Colombia and abroad is part of the study. Institutional and management plans must also be developed for four vertically integrated local producers' marketing cooperatives and their central union which are to be set up under this program. In order to ensure that the recommendations for this important project can be put into practice, experts from several continents have been subcontracted to collaborate with ILMA personnel. Also contributing with specialized knowledge are the Tropical Products Institute of London and the Technological Research Institute of Colombia.

Another research project is being undertaken with the Cali Municipal Utilities Corporation to examine the city's public market system and propose reforms through the planning of a new supply center outside the city to replace the congested and antiquated market located in the heart of the city.

The idea of a Latin American Agricultural Marketing Institute has become a reality. The trial period is over and ILMA's work is now making positive contributions to the improvement of Latin American agricultural marketing. A long-standing need is beginning to be filled and, as the support for ILMA broadens, an increasing number of Latin American countries are likely to benefit by its services.

Jordan Marketing Institute

A permanent marketing research and training institute was established at Amman, Jordan with financial assistance from UNSF and started operations in 1964. The institute is to carry out research, provide information, demonstrate marketing methods and techniques suitable for Jordanian conditions and train personnel on three different levels; namely, (1) marketing administrators and research workers, (2) marketing technicians, and (3) foremen. Particular emphasis will be placed on the demonstration side. Two modern packing plants for fruit and vegetables are under construction; they will be operated by fruit and vegetable marketing cooperatives under the direct supervision of the institute's staff. The staff consists of a marketing and credit expert who is, at the same time, the Project Manager, and experts in refrigeration and cold storage; grading and inspection; marketing management; marketing research; fruit and vegetable packing and transport. Provision has also been made for the services of consultants. In the initial phase, the center will concentrate on the development of an efficient export marketing system for fruit and vegetables and during the second phase its activities will be expanded to include work on marketing problems of other commodities.

Short Training Courses in Agricultural Marketing

FAO arranges and assists the governments in planning and conducting training courses to meet the needs of particular countries or regions. For instance, a regional training course on the grading and inspection of rice and the economics of rice storage operations was organized in Thailand in 1953 in which 53 government and private persons participated. A series of national training centers started in 1962. So far FAO has assisted in planning and conducting training centers in Indonesia, Korea, Thailand, Ceylon and Malaysia. The seminar in the Philippines is another link in the same chain. FAO provides lectures, literature on marketing and film shows.

Training on the spot is also provided by the FAO Country Experts to their respective counterpart offices. Some of them are also recommended for FAO fellowships for training abroad. These fellowships generally last from a couple of months to one year.

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THE ROLE OF MARKETING IN THE IMPLEMENTATION OF PRICE POLICIES

Bibiano B. Arzadon
ECAFE/FAO Agriculture Division
Bangkok, Thailand

In almost all countries of Asia and the Far East, one of the major problems in the pursuit of some economic activities in the field of agriculture is the unsatisfactory pricing mechanisms. Prices might be manipulated by middlemen which perhaps might give detrimental results to producers and consumers. For instance, there are differences in the prices paid for the same agricultural commodity between two places, between months of the same year and between successive years. Or, in the case of a lot of the same agricultural commodity having different quality, still their prices would be the same. Also in the case of the same commodity having different distances from the place of consumption, sometimes, prices would be the same. These are attributed to some defects in the current marketing process. It is of prime importance, therefore, that problems in pricing be taken into consideration within the framework of marketing programmes. This is so because it is through marketing that could cushion the impact of fluctuations of the price level which otherwise would cause some misfortunes of some social groups in the economy.

Functions of Price

It is deemed important to familiarize ourselves with or review first the functions of price so that we could relate the importance of marketing to the implementation of price policies. But before doing so, we must review what "price" is.

Definition of price.[1] Price is "A value expressed in terms of units of money". In this definition, value connotes the exchange value — "The power of one good or service to command other goods or services in exchange". So that when we speak of "price" in this lecture, it means the monetary expression of value.

Prices have also two characteristics, namely:

a. they fluctuate; and

b. they have relationships between another.

Prices fluctuate because values are not fixed but are subject to continual change due to countless factors prevalent in a dynamic society.

Relationship between prices exists because money is used as the common denominator of all values.

These explanations, however, are not sufficient to give the over-all picture of the characteristics of price. These could better be explained when we try to understand the functions of price.

In general, the functions of prices could be divided into:

a. as a means for recording exchange value at particular times and place;

b. they equate the forces of supply and demand; and

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[1] Waite and Trelogan, Agricultural Market Prices (John Wiley & Sons, Inc.) N. Y. 1951.

c. they indicate relative needs for particular goods or services.

In this case, the net effects of changes in supply and demand are shown.

Prices in a free market therefore act as barometer to show economic conditions. They furnish the tool in the performance of the allocative function of marketing.

On the other hand, the allocative function of marketing is fulfilled through the change of ownership from the seller to the buyer. To facilitate this transfer of the title of the commodity changed money and prices are used. However, prices have wider range in use — guiding or regulating production and consumption. In this connection, the gap between production and consumption is bridged by the market which serves as a link. an intermediary capacity. This function is done through the "allocation of resources" on the production phase and through the "rationing of goods or services" among buyers on the consumption side. This situation leads us to visualize the influence of marketing on the movement of prices.

e. g. When a product is in heavy supply in the market, prices become relatively low. This discourages farmers from hiking up their output and encourages consumers to use it. On the other hand, when there is a low supply in the market, prices make an upsurge. This gives an incentive to farmers to increase their production and discourages consumers from using much of as formerly.

This particular illustration shows the need of a policy to improve the marketing structure so as to stabilize the price at times of plenty or of scarcity.

In connection with the illustration given above it should be noted that the extent of the agricultural problem in Asia and the Far East is monetary in nature — a problem which has to do with the whole system of exchange relationships and which rightfully belongs to the whole society. Putting it on the other way, the greatest agricultural problems are fluctuations in output, prices, and income. How to approach these is to lead them to improve marketing machinery. However, government interference in laying down marketing programmes is needed in order to implement price policies because the current problems as stated earlier could not be meted out by leaving them at the hands of the farmers alone.

The main objectives of the government, therefore, in implementing prices policies (price support and stabilization) are:[1]

a. to do away or minimize fluctuations with a wide range which give adverse effects to both producers and consumers and to contain fluctuations with a narrow range which does not need substantial transfer payments from the non-agricultural sectors of the economy;

b. to assume cultivators equitable treatment and a fair return of their produce and a larger share from the consumer's money through improved marketing practices; and

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[1] FAO, Implementing Price Stabilization Policies, Rome: 1963.

c. to provide a favorable economic and social climate to expand agricultural production to meet the increasing demand of a growing population.

Marketing Factors and Prices

It is attempted to show herein some illustrations on how marketing factors could implement price policies.

A case of price discrepancies between areas. As noted earlier, in some countries in Asia and the Far East, there is a wide range in prices for standard products within the same country.

e.g. In the Philippines, the average price of pork in May 1964 was ₱5.00 a kilo in Badoc, Ilocos Norte while the average price in Laoag, Ilocos Norte was ₱4.00 a kilo.

Prices for the same product as illustrated varied greatly between nearby areas due to inadequate and costly transportation coupled with a lack of marketing information. This wide discrepancy could be minimized if there is a government policy to improve the marketing system by regulating excessive transportation cost and by establishing a better information service. The promulgation and implementation of such a policy would bring prices back into line with those in neighboring markets by facilitating competition.

A case of wide gap between prices in central wholesale markets and prices received by farmers. In several countries of Asia and the Far East there is the existence of a wide gap between prices in central wholesale markets and those prices received by farmers for the same commodity.

e. g. In Thailand, there is a margin of Baht 262 per ton between the price received for paddy by farmers in Kok Sumrong district, Lopburi province and the price in Bangkok.

The above situation could be attributed to the cost of transportation over long distances and poor roads; sales made involving small lots through personal negotiations and supervision; poor sorting and packaging; limited bargaining power of producers; and lack of marketing information.

It should be noted though, that in Thailand prices of all commodities are determined generally by free market forces; hence government interference with the free-pricing mechanism is held to a minimum. Although there is the "Public Warehouse Organization" in Thailand to stabilize prices, this scheme of undertaking purchases of rice, maize and jute is not in active operation throughout the year until when there is a visible sign that producer's price of the major crop is falling too low. In fact, farmer's sales take place generally during harvest period when prices are at their lowest.

If policies are geared therefore toward the improvement of marketing services and facilities, the margin between farm and the market center would narrow down to a minimum.

A case of price fluctuations within season. It is common in a number of countries in our region that excessive seasonal price fluctuations are due to inadequate storage and lack of credit and risk-bearing services; or in places where they exist, they are available at a high cost.

In this situation, farmers could not wait for seasonal improvements in price because they have to sell for cash their produce immediately after harvest to meet mounting obligations. In this case, what is needed is the access of farmers to a warehouse which enables lending agencies to accept grain stored therein as lien.

In this connection, a good example to illustrate how marketing programme could help in implementing price policy is in the case of Korea. The "South Korean village warehouse construction and rice lien programme" succeeded in minimizing the seasonal variation in grain price from 40 to 30 per cent. The working operation of this programme is to permit farmers to have their rice stored in Government warehouses, and to obtain cash loans against their deposits to be repaid plus interest and other incidental expenses at a time when the grain is sold later in the season.

It should be noted, though, that in instituting programme to moderate the seasonal price fluctuations, one should bear in mind to maintain a margin adequate to pay for storage and other costs and to induce the provision and use of economical storage facilities. This is so because if a purchasing agency could not adjust its prices in conjunction with the required time of delivery he will be over-stocked in due time especially after harvest.

Pressures by local merchants. In the presence of few major buyers in an area or local market, farmers are usually subject to pressures. Collusion of these few buyers generaly results in farmers to dispose their produce at a very low price. This holds true when in a certain locality, the official licensing of one enterprise to do certain marketing functions (e.g. doing local purchases or price in an area) is resorted to. This situation is further aggravated when such buyers have control of the essential processing facilities and knowledge of price movements and when farmers are not allowed to seek alternative buyers.

e. g. I know of a particular region in a certain country where the purchase of tobacco leaf is carried out by one authorized dealer in a community having control of the preliminary grading and the processing facilities and having the most up-to-date information on price movements. In this instance, if the producer cured his own leaf tobacco and finally sold it to the licensed agent, his leaf tobacco (if it were Grade A) would be down graded to Grade "B" or "C". This is so because the flue-curing facilities of the licensed dealer were not utilized for a certain fee and he could just manipulate to alter the grade on the leaf tobacco offered for sale.

In this instance, a marketing policy could be established as a measure to protect farmers — that of allowing concentration of sales in specific markets where buyers must attend in order to obtain the produce. This in turn generates competition between buyers to assure a fair return to producers.

Cooperatives or farmers' associations and price. Some countries in Asia and the Far East have experienced that when there is a weak marketing machinery and a weak bargaining position on the part of producers, a minimum or fixed price to farmers could be attained by them only if they sell their produce to the stabilizing agency at the fixed price. In this connection, there is a need for purchasing centers to be situated strategically in rural areas and to be handled by the stabilizing agency itself, farmers marketing and/or cooperative association working as agents of the stabilizing agency.

e.g. In Ceylon, China (Taiwan) and Japan, nearly all agricultural producers are expected to avail themselves of an official buying station within a circuit of a few kilometers only. In Burma, they now have 10,000 cooperatives and some 4,000 more to be organized that handle commodity distribution or for collective marketing of farm produce and manufactured articles.

In some countries, farmers usually cannot sell their produce (e.g., rice) at the official price due to insufficient number of cooperatives or buying points or such cooperatives lack storage funds, labor and other facilities. Also, in places where farms are fragmented or sizes uneconomic resulting to limited volume of business, multi-purpose cooperatives seem to fare much better than single purpose cooperatives where farm associations are widely scattered or very small in scale only.

Market news service. In many countries of Asia and the Far East, most farmers get their only source of information through word of mouth from buyers and other farmers. This is one reason why the bargaining position of farmers is weak. To take advantage of the use of market news at other markets farmers must take their produce to those markets or there should be enough competition between buyers to force them to pay equivalent prices minus the costs incurred in transporting the produce.

The creation of a market news service as one of the programmes in marketing would strengthen farmers bargaining position and ultimately increase the return of his produce.

Institutions and Market Prices

There are institutional factors that exert influence on the effectiveness of prices and price stabilization measures which ultimately would act as production incentives.

Degree of monetization. Most farmers in Asia and the Far East produce primarily for their own requirements. So that when more or just a little percentage of the crop would go through the market channel, the pattern of the farmer's output would unlikely be influenced by prices. However, as production expands and more of it would exceed the farmer's family requirements, price responsiveness of farmers would likely increase. This means that an increase in prices would induce them to produce and offer more in the market for sale in order to earn the optimum or maximum profits.

e.g. In Japan (a monetized agriculture), the greatest benefit from price policies and the greatest response came from the larger farmers with annual sales of over 300,000 (about U. S. $830.00). It should also be noted that the early measure of Japanese agricultural development known as the institution of land tax payable in cash had the effect of the monetization of agriculture. Similarly, in India, the replacement of grain loans to cultivators in the form of cash loans had the same effect.

Increased monetization of the agricultural sector coupled with incentives to expand production will bring not only a larger percentage of the output into the marketing channel but also will induce the farmers to produce more. Producers' proximity with the market forces would change their mentality and reveal to them the opportunity of earning profit by producing even for distant markets. In addition, the desire to acquire consumers' goods brought about to their notice by the monetization of several sections of the market, often acts as primer to expand production.

Land tenure. It was by general agreement that farmers' response to price incentives was greater among owner cultivators than among tenants.

e.g. The land reform programmes in China (Taiwan), Republic of Korea, and Japan, which were considered effective as they had minimized tenancy, made farmers very market conscious and they became more influenced by price factors. Similarly, the abolition of the "Zamindari" system in India and Pakistan had similar effect, because farmers were free to choose their own cropping pattern.

It should be noted, though, that among tenant farmers, the response to price incentives depends on the type of tenancy.

e.g. Those paying fixed rent (like a lease) would be like owner-cultivators and they would benefit to any increase in their output.

Indebtedness. The lack of credit at reasonable rates and the existence of indebtedness among small farmers would reduce their response to price incentives. This is so because mounting obligations on the part of farmers force them to sell even their standing crops (e.g., paddy, fruits) even before harvest time at a price lower than the prevailing ones or guaranteed prices. However, if farmers are extended credit under liberal terms, they could choose their crop pattern or avail themselves of fertilizers and other necessary implements to expand their production and to take advantage of the market situation.

Thus, credit on reasonable terms would add up to the effectiveness of price incentives measures.

These illustrations and examples given suggest that production response of farmers to price policies, and incentives could be formulated and could vary according to the institutions of the country and the nature of the trade in the commodity measures.

We have now gone quickly over the most common marketing situation in Asia and the Far East coupled with different alternative policy possibilities which are needed as foundation and the implementation of various price policies.

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THE ROLE OF CREDIT IN THE MARKETING OF FOOD AND AGRICULTURAL PRODUCTS

Orlando J. Sacay
Director, Agriculture Division
Program Implementation Agency

Before going into a detailed analysis of the role of credit in the marketing of agricultural products, I would like to establish the scope of my discussion.

First, we must define what marketing is, for its meaning has been subject to varied interpretation depending on the individual's point of reference. Credit must also be defined, in order that a clearer understanding of the relationships between credit and marketing can be achieved. Then we shall discuss the need for credit, after which I will briefly review present developments and future requirements for credit facilities in the marketing of agricultural products in the Philippines.

Marketing Defined

Marketing has been defined as the process of getting products to consumers. Distinct from the productive process or the actual growing of crops and raising of livestock, marketing is interpreted to consists of all functions performed after the product leaves the farm. These functions include transporting, storing, processing, merchandizing, and so forth until the product reaches the ultimate consumer. This interpretation is commonly shared by agricultural economists.

An industrialist would, however, think of marketing as the functions performed on the product after it has reached a physical form acceptable to the final consumer. He would still consider the processing of agricultural products as an activity of production with agricultural products considered merely as raw materials. A manufacturer of canned vegetables would, for instance, consider fresh vegetables and tin plates as the raw materials and the canning process as an activity of production. This interpretation seems to become more logical when the final form of the product is quite distinct from the primary form of the agricultural product. An example of this is explosives as compared to copra or soybeans. In this case, the field of marketing is considered to cover only the distribution or merchandizing of the final product.

It is my belief that the above two interpretations represent two extremes. Rather, agricultural marketing should only refer to processes where no substantial physical change has been made on the agricultural product. Hence, agricultural marketing would cover the entire movement from the farm to the ultimate consumer in the case of packaged fresh fruits while marketing would be limited to the movement from the farm to the textile mill in the case of cotton. The manufacture of textiles is very much a part of the industrial sector as distinct from the agricultural sector.

I would, however, prefer to discuss all the processes involved in bringing agricultural products to the final consumer although I consider processing to be very much a part of the industrial sector which actually serves as a market for agricultural products.

Credit Defined

Although they are often used interchangeably, the term "credit" should be distinguished from such terms as "financing", "loans" and "debts".

Obtaining the necessary capital for a business concern is referred to as "financing". Financing of a business would involve the use of owned capital or borrowed capital. The capital being borrowed is called a "loan". As a result of the loan, the borrower is in "debt", a description of his financial condition. It is the use of borrowed capital which we call "credit".

The use of credit occurs in several ways. When produce is sold in advance, when loans are secured on the basis of commodities which would ultimately be sold, or when products are acquired prior to actual payment, credit is utilized or obtained.

A type of credit involving the use of operating capital occurs when funds are borrowed for the proper operation of a business concern. Examples of this are expenditures for labor, supplies and materials, (which are for the most part recurrent in nature) and investment in stocks or inventories. Credit for these purposes are usually short-term in nature.

Another type of capital where credit is usually used is for capital investment. Examples of this are investments in permanent improvement or fixed facilities such as buildings, rice mills and others. Credit for this type of expenditure is usually long-term in nature.

Credit is used not only by individuals and agencies but also by the government when required expenditures exceed financial resources.

Need for Credit in Marketing

The basic reason for the use of credit stems from the insufficiency of owned capital to meet the capital requirements of an individual, a firm or an institution. The importance of credit becomes more pronounced as an economy develops. The owners or contributors of the various resources employed in the productive or marketing process become more distinct from one another. The supplier of labor, the manager of the enterprise and the provider of capital tend to become different individuals or institutions. Credit is a means of bringing together capital with management and labor.

And even if a person were to own capital, it may be an under utilization of his managerial talents if he were to operate within the limits of his own financial resources. His returns would greatly increase if he were to expand his business with the use of borrowed capital.

If we consider the objectives of various efforts to improve agricultural marketing, the need for credit will become more apparent. These objectives are:

a. To provide to the agricultural producer the best possible price.

b. To allow a viable operation of business concerns engaged in the marketing of agricultural products.

c. To improve the efficiency of marketing by bringing down costs.

d. To increase demand or develop new markets for the product.

With these goals as a basis, several reasons underlying the need for credit may now be discussed.

Seasonality of agricultural production. Agricultural production is the process of exploiting natural resources through the use of labor, capital and technology. Agricultural products are produced when they can be produced rather than when they are actually needed. Hence, most products are produced during certain seasons of the month in anticipation of their future consumption. Even coconuts and eggs which are produced the year round reaches seasonal peaks of production due to environmental changes.

As a result of this seasonality, prices are depressed during peak production periods and high during off-season months. For a farmer to take advantage of high prices, he must postpone the sale of his products. However, since the general level of farm income is low, agricultural products have to be sold immediately after harvest unless advances on future sales such as commodity loans are obtained.

Large volume of products handled by traders. In the assembling and distribution of agricultural products, the margin of profit obtained by traders is usually narrow. The way to make such a business viable is to enlarge the volume of products handled. Inventory or receivable financing is, therefore, inevitable if an adequate volume of business is desired.

Even if a person were to own a substantial amount of capital which he could tie-up with inventories or receivables, he would still be under utilizing his resources and depriving himself of larger incomes if he did not take advantage of his capacity to make use of borrowed capital.

Large investment in processing facilities. Investments in processing facilities are usually large and the recovery of such capital is extended over a number of years. For this reason, credit is usually utilized to meet the necessary capital requirements of a firm or to release for other purposes owned capital which would otherwise be tied-up with slow recovery investments.

Encourage development in specific areas. Credit is said to be like a string — it can be pulled but can not be pushed. Credit can not directly effect changes but it can encourage or influence developments in specific areas. It has been used to encourage the direction or redirections of specific lines of action or decisions made by the private sector. For instance, greater volumes of credit for the manufacture of abaca products should encourage the shift from the export of the raw fibers to finished abaca products.

Promote export trade. An instrument which has been utilized to encourage the sale of products abroad is export credit. By making advances to future foreign exchange receipts, exporters are able to provide better terms to foreign buyers, thereby increasing their competitive position in the foreign market. Export credit also enables manufacturers to immediately plow back to the productive process funds which would otherwise have been tied-up with receivables.

Promote production. Especially in the case of annual crops or livestock where farmers can easily go in or out of production, the establishment of storage and/or processing facilities can and has directly encouraged the production of certain crops or livestock. The establishment of a vegetable canning plant or a milk bottling plant, for example, are incentives to farmers to produce vegetables or milk. Agricultural production can, therefore, be encouraged if credit were made available to prospective inventors in the processing venture.

Implementation of nationalization laws. When the control of a certain industry is legislated out of the hands of a foreign group, adequate credit must be made available for the effective implementation of the law. The control of any industry by an alien group has been brought about by the group's substantial capital investment in the marketing phase of the industry. To enable nationals to recover control of the industry, it becomes essential that adequate credit for operation, equipment and fixed investment be made available. This is essential to the desired displacement of alien-owned capital.

Large government investment in infrastructures. Requisites of an efficient marketing system are good roads, harbor facilities, market places and other infrastructures. The investment requirements of these projects are almost always very large, making it difficult for developing countries to finance such improvements. Loans from foreign or international financial institutions have been obtained to enable developing countries to enjoy the benefit of these public work improvements at the same time that the necessary capital for such investments is being accumulated.

Prevent undue interference by government in the marketing process. The private sector may not entirely be responsible to the needs for improvement of the marketing system. This is especially true if the orientation of such improvements is the national welfare rather than the benefit of individual firms. As a result, the government has had to establish agencies to undertake marketing operations to effect the desired changes or improvements.

But a consequence of a government agency undertaking a function which private enterprise is capable of doing, there is almost always an inability to achieve efficiency of operation. The most inefficient business organization is one run by the government. One run by a cooperative is usually more efficient and those run by individual enterpreneurs of private corporations are most efficient.

The situation becomes worse when the government business organization takes a social orientation. Losses are larger and eventual failure becomes apparent. The government may even adopt policies and undertake operations which are actually detrimental to private enterprise.

The solution to the dilemma is to limit the participation of the government to the role of providing adequate credit in order that private enterprise will enter into the desired marketing venture. Although progress may be slow, development will be on a sustaining basis.

Adequacy of Credit Facilities for Marketing

No one can exactly say how adequate or inadequate are the credit facilities available to the marketing system and the other aspects of bringing agricultural products to the consumer. The most that can be made is an approximation of the relative speed of development in specific areas.

There was one large government program initiated in 1952 by R. A. 821 with the purpose of providing liberal credit facilities to farmers. The Agricultural Credit and Cooperative Financing Administration (ACCFA) was organized to provide, among others, commodity loans to farmers through duly organized Farmers' Cooperative Marketing Associations (FACOMAS). A total of P42 million in commodity loans was granted to farmers by 1960.

While the objective of the program was laudable it ended as a failure. ACCFA's cooperative base was weak, political intervention seeped in, and mismanagement was inevitable due to the very rapid organization of cooperatives. In addition, conflict arose with another government corporation, the National Rice and Corn Corporation (NARIC, now the Rice and Corn Administration). The mode of operation of marketing cooperatives consists of taking advantage of price fluctuations while the NARIC took all efforts to stabilize or even depress prices through the importation of rice.

In the same year (1952), R. A. 720 (the Rural Banks Act) was initiated. This is one credit program that has shown considerable success. The 299 rural banks which have to date been organized has contributed greatly to satisfying the credit requirements of farmers. However, credit assistance to farmers had been geared for production purposes. The rural banking system has hardly entered the commodity credit field.

Credit for wholesalers, traders and exporters have greatly expanded in recent years. The commercial banking system has manifested a phenominal rate of growth. Various sources have, therefore, been available to finance current assets such as inventories and receivables.

Export credit has also been provided by the commercial banking system. However, the effect of export credit on the promotion of foreign trade may have not been great due to the 120-day restriction by the Central Bank in the surrender of foreign exchange receipts.

Credit for the processing of food and agricultural products had also shown some degrees of expansion. This was brought about by the increased emphasis on industrialization by the government. In addition to the credit provided by government lending institutions such as the Development Bank of the Philippines, funds have been made available for processing by such agencies as the Government Service Insurance System, the Social Security System and the National Investment and Development Corporation. The establishment of the Private Development Corporation of the Philippines and the appearance of investment banking institutions also indicate the expansion of credit facilities, largely for industrial development, in the private sector.

There is a great need to improve our road system, ports and harbor facilities. Financial assistance for such projects have been obtained by the government from foreign and international financial institutions. The expansion of credit which our government can obtain has not been limited by the availability of credit abroad but by our ability to develop and present feasible projects for financing to such agency as the International Bank for Reconstruction and Development (World Bank) and by our ability to properly execute these projects.

The lack of capital is a condition prevailing in developing countries such as the Philippines. Although this is a general problem which should eventually be solved, the more significant observation is the varying degree by which the capital requirements of various phases of marketing and processing have been satisfied. With the growth of the commercial banking system and the emphasis by the government in industrialization, progress has been attained in expanding the credit facilities available to wholesalers, traders, exporters and processors.

However, it is strongly evident that attention on the availability of commodity credits to the rural areas has not been given. Credit institutions which provide commodity loans to farmers, especially small farmers, is almost non-existent. It is, therefore, imperative to expand the availability of commodity credits to farmers to free them from the force of necessity of selling their products immediately after harvest. This is a requisite if farmers are to obtain the best possible price — an essential in encouraging them to devote greater efforts in increasing their production and income and attaining a faster rate of growth in the agricultural sector.

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MARKETING BOARDS

H. J. Mittendorf
Marketing Branch
FAO, Rome

Definition

Marketing boards are trading or non-trading marketing organizations, operating under government delegated authority, and granted legal powers for the enforcement of compulsory marketing schemes for primary or processed natural products. They become public marketing agencies operating on a financially autonomous basis.

The compulsory feature of marketing boards is that all producers and traders in the commodity under their control are compelled by law to adhere to the regulations issued by the boards. The compulsory factor, together with the delegation of government authority, distinguish clearly marketing boards from cooperatives.

Membership in a marketing or bargaining cooperative or a market promotion group is voluntary; it cannot be expected that all growers of the product concerned will join. This is especially unlikely if the programs envisaged involve substantial financial contributions, or acceptance of group control over individual marketing decisions. To bring in producers who could otherwise stay outside a group marketing program, farmers in many countries have obtained powers of compulsion by public legislation. By means of a government statute they are empowered to set up a marketing board which can issue marketing orders or regulations enforceable in the ordinary courts. This authority is usually limited to producers and handlers of a specified commodity, or situated in a specified area.

The members of the board, usually representatives of the Ministries of Agriculture and Economics, and of producers, traders and consumers, are responsible for the policy of the board, while the managing director of the board is in charge of implementing the adopted policy and of the effectiveness of day-to-day operation. Marketing boards have the advantage over government departments of receiving greater support of their policy from traders and producers since these groups, with their special technical knowledge of the marketing situation, are represented on the board.

Marketing boards have been set up in many countries. In Britain and Commonwealth countries like Australia, Canada and South Africa, they were set up to help solve specific problems growing out of the depression of the 1930's. In Germany they were established to stabilize markets by regulating imports and maintaining bufferstocks. A comparable development in the United States of America has been the marketing order which is employed characteristically in California for specialized fruit and vegetable crops, and throughout the country for milk.

In order of degree of responsibility involved and complexity of operation, one may distinguish the following broad types of boards:

a. Advisory and promotional.

b. Regulatory.

c. Stabilizing prices without engaging in trade.

d. Stabilizing prices by undertaking buying, storage and selling operations alongside other traders.

e. Export monopoly trading.

f. Domestic monopoly trading in specified areas or channels.

The simplest type of board is one established to carry out market research, promote sales and furnish information. It may undertake pilot programs to develop new uses and outlets, advise on varieties, packing, and grade standards, may conduct quality analysis and arbitrate on disputes. To support its operation a small fee is levied on all sales of the products covered. Sales promotion is a main activity under the Californian marketing orders; $1.7 million was spent on wine promotion in 1960-1961. Other examples are Australian Federal Marketing Boards, the Rhodesian Tobacco Export Promotion Board and the Ceylon Tea Propaganda Board.

A board may be empowered to regulate terms and conditions of sale (Type 2). Usually it establishes obligatory quality and packing standards for sale to certain markets, sets up laboratories for quality analyses and perhaps some processing installations, and engages an inspectorate. Such a board is frequently set up to maintain the reputation of a particular country on foreign markets. The high reputation of eggs exported from the Netherlands is due in part to such an inspection system.

The prime motive in the establishment of some marketing boards is to stabilize producer prices. Such a board often negotiates prices with large processors, wholesale buyers and distributors on behalf of producers and/or consumers, as in Canada for various fruits and vegetables and in Britain for hops. The board (Type 3) may also control the area of production, or supplies put on to specific markets in specified forms at specified dates, or assure certain guaranteed prices for a given volume of output, leaving additional output to find its own market. This may involve individual registration of producers and handlers and reporting of sales, especially if prices for specific quantities are supplemented.

This type of marketing board or order is often used for products whose perishability requires that sure outlets be established in advance. In the case of milk the board undertakes to assure consumers a regular supply of fluid milk, and to pool returns to farmers from sales in this market and at lower prices to manufacturers. The fluid consumption and manufacturing markets must be kept separate by means of a control system or else fluid milk consumers will buy the milk offered for manufacture. A marketing board can maintain such a system by refusing supplies to any distributor who sells milk for domestic consumption at less than an agreed price. Milk not sold at this price is then sold to manufacturers for whatever price it will bring. Total receipts from both markets are then divided by the quantity sold to give an average price per unit sold and are distributed to individual suppliers accordingly.

Another way in which this type of group marketing control can stabilize and raise average prices is through the manipulation of market flows. The objective of flow control programs is to adjust shipments over different times of the year, or between different outlets, in such a way as to maintain reasonably high levels of demand in all of the different markets at all times. Generally, an average price target is set for each outlet on the basis of experience in the preceding season. Sales are then expanded or contracted in order to avoid flooding the market at any one time or place and thus breaking the target price. These adjustments can be arranged through a marketing board with power to allocate markets to particular producers and limit the quantities delivered. This approach is characteristic of the marketing programs for fruits, vegetables and nuts in California. Group control over sales permits the use of policies to improve returns for agricultural production, comparable to those employed by large industrial manufacturers.

Characteristic of these control programs is group determination of the sales made by individual producers and handlers. Where this is administratively difficult, other approaches to stabilization have been tried. In the Near East and Latin America marketing boards and branches of public banks or development institutes have been set up and furnished with capital to purchase basic grains, maintain buffer stocks and sell on open domestic markets alongside other traders (Type 4). The objective is to improve incentives to producers by buying to maintain a minimum floor price, and to protect lower income consumers by selling from stocks when rising prices are likely to cause hardship. Such a board which uses a buffer stock to stabilize supplies and prices within and between seasons must have its own storage and marketing equipment and must also be able to control imports and exports of the commodities concerned. Usually publication of the price at which it will buy is enough to induce other market channels to offer comparable terms; consequently it does not have to take up a large part of the total crop marketed. The buying points must, however, be sufficiently widely distributed to be within reach of most farmers.

Where a product is designed primarily for export markets, domestic producers can be protected from the effects of the more violent fluctuations in world prices by means of stabilization funds. The marketing boards (Type 5) set up after the Second World War in Ghana, Nigeria and Sierra Leone to stabilize prices paid for cocoa, groundnuts and palm oil exports employ this approach. A reserve fund is accumulated when export prices are high, and is drawn upon to maintain prices to farmers when they are low. To carry out such a program, marketing boards in these countries have been granted a monopoly of all export sales. Domestic purchases are made through licensed agents and the board's own buying stations. Export sales are made directly by the board or through brokers on major international markets. In many of the French speaking African countries the goal of price stabilization has been approached by means of a reserve fund to which private exporters contribute when export prices are high and draw upon when they are low. A main problem with these schemes is to maintain an adequate reserve fund under pressure from producer and other interests to disburse it.

Sometimes boards are also granted a marketing monopoly for certain produce in specified areas or market channels in return for providing agreed marketing and processing facilities (Type 6). Usually this is done when the investment required is considerable and the volume of produce to be handled only is enough to support one such enterprise on an economical scale. The Meat Commission in Kenya and Cold Storage Commission in Rhodesia occupy such positions.

Effectiveness of Marketing Boards in Achieving Specific Marketing Goals

Suitability for the purpose does not alone imply efficiency of operation. It must be recognized that however well adapted a marketing board is to local conditions and requirements, a marketing board scheme may still prove completely ineffective when, for instance, the required reliable high caliber staff or financial reserves are lacking, or when the board is hampered in the elaboration and implementation of its price and marketing policy by political and/or sectional pressures.

Clearly there are risks to be faced. The directors of some of the government sponsored boards have been subjected to political pressure which has resulted not only in the misuse of funds, e.g. for the financing of group or individual political campaigns, but also in the adoption of economically unsound price policies.

Another result of political influence may be the appointment of board and staff members on the basis of political affiliations and patronage with inefficiency, overstaffing and lack of continuity in policy as a result.

However, evidence of such weaknesses to a varying degree is forthcoming from most countries and in most institutions. It is not confined to marketing boards. Private trading enterprises, cooperatives and government departments are susceptible to similar difficulties. The most important issues are surely whether in a particular set of conditions the risk is so great as to negate the usefulness of a board, and what can be done to reduce these risks and keep the incidence of speculations and exploitation to a minimum which does not prejudice board operations.

Staffing Problems

Two of the main problems of marketing boards are, in the initial stages, to find personnel with the necessary qualifications to carry on operations successfully, and later to avoid overloading with staff who are either unnecessary, incompetent or both. Marketing boards, particularly those concerned directly with trade practices, or trading on their own account, are involved in rather complex activities which call for a high degree of administrative, technical and commercial skill. This applies to the directors and managers responsible for policy making decisions and to the branch managers, inspectors and others needed to implement these decisions.

They must be able to attract staff of high caliber at least equal to that of private firms by offering an incentive comparable with the responsibilities of the posts.

As soon as the establishments of a marketing board is envisaged plans for training suitable personnel should be got underway.

Financing. The fixed and working capital requirement of marketing boards can be substantial. Several board projects have failed to achieve a satisfactory implementation of their stabilization and other goals because of inadequate financial resources. In general, when the funds available are limited, or there is doubt as to whether they will be available at the right time, it is best to scale down programs accordingly, rather than run a risk of inability to pay salaries or failure to implement a pre-announced minimum price, for example, which could well destroy confidence in marketing boards for some time to come.

Alternative Ways of Achieving Marketing Board Objectives

In considering proposals to set up marketing boards to carry out certain improvement programs, alternative approaches should also be taken into account. Generally, they are by no means the only instrument that can be used. Advice on marketing and promotion of sales, the control of quality, packing, etc. and of trade practices, the stabilization of prices to producers and consumers, the provision of needed marketing and processing facilities and the separation of markets and adjustment of total sales on various markets to raise producers' returns may in principle also be implemented by direct government action or by government departments in collaboration with semi-public, cooperative and private enterprises. The particular advantages of a board-delegation of responsibility to an autonomous body which can establish its own procedures of operation, staffing, financial management, and permit a combination of public and commodity interests in its direction must be weighed against the alternatives available for each situation and objective.

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AGRICULTURAL MARKETING EXTENSION AND DEMONSTRATION

F. A. Shah
FAO Regional Marketing Specialist
Asia and Far East.

Agricultural Marketing

During the last week you have heard a number of lectures on various aspects of agricultural marketing in which some of the lecturers have referred to the definition of marketing. Here I need not go into its details and explanations again. It would, however, be desirable to refresh your memories with a brief description and meaning of marketing as it is the function of the marketing extension worker to educate the various interests concerned in the improvement of marketing systems. Marketing is the combination of activities by which agricultural produce and raw materials are made ready for, or capable of, consumption and reach the final consumer in a suitable form at the time and in the place he wants them. Thus it includes assembly, transport, sorting, cleaning, grading, storage, packing, initial processing, looking for suppliers, looking for outlets, financing the holding of produce between the time that the producer is paid and when it is bought by the consumer, taking the risk of holding the produce until an outlet is found, adopting it to consumers tastes, informing them of its availability and quality, presenting it in convenient sized lots and all the other operations involved in bringing goods from the producer to the final consumer.

Extension Services

According to an FAO report[1] extension services in Asia and the Far East are of recent origin, introduced and developed mainly under the impact of bilateral economic aid extended by the developed countries of the West. So far only Japan, the Philippines and Korea have enacted legislation in this respect, while other countries in the region are carrying on extension work through the Ministry of Agriculture, the Department of Agriculture or the farmers' associations. The purpose of the Japanese Extension Act of 1948 is "To help farmers in obtaining and exchanging useful and practical information on agriculture and farm living, as well as to encourage the effective application thereof".

In the Philippines, the Bureau of Agricultural Extension was created in 1952, under the Republic Act No. 680. It is empowered to consolidate, coordinate and expand agricultural extension work in the country for the purpose of diffusing among the people useful and practical information on agriculture, forests and soil conservation, animal husbandry, fisheries, home economics, and rural life, and encouraging their application through field demonstrations, lectures, conferences, publications and other means of imparting information.

The government of Korea promulgated the Agricultural Extension Law in 1957. Its purpose is "To increase agricultural production and to improve the farmers' social and economic livelihood through conducting scientific research and experiments, as necessary for improvement, and teaching these new techniques of farming and living to the farmers".

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[1] "The Present Status of Agricultural Extension Development in Asia and the Far East", C. W. Chang, FAO, Rome, 1961.

The purposes of extension under the above mentioned laws vary slightly, but there is a stress on one central point common to all of them, i.e., to diffuse among the rural people useful and practical information on agriculture and farm living, and to encourage the effective application thereof. With regard to the source for obtaining useful and practical information, the Korean Extension Law indicates through scientific research and experiments, as necessary for improvement, while the Japanese Extension Act suggests through exchanging experience amongst the farmers. In fact both the methods are required and they are practised in varying degrees in all countries of the region. The ultimate aim of extension, however, is the development of people. Unless people are changed, no permanent improvement can be achieved. Physical and economic accomplishments become sterile without the development of people. The latter can be achieved by an educational process with a view to bringing about desirable changes in human behavior, viz., knowledge, attitude, skills and motivation.

Need for Extension Services

The present marketing systems in most of the countries of the region are such that a lot of the marketable surplus is wasted due to lack of proper methods of preparation of the produce for the market, such as cleaning, sorting, handling and transport, storage, packaging, etc. The lack of market news service and the lack of knowledge about the sources and procedures involved in obtaining credit further handicap the farmer in obtaining full value for his produce. These factors also affect the quantities arriving at the assembly and central wholesale markets, the prices paid by the consumers, etc.

Some of you are aware that in 1963, FAO conducted case studies in 11 countries of this region with a view to find out the marketing factors affecting prices and returns received by the cultivators.

Some of the findings of these studies are mentioned below as the returns to the farmer have a direct bearing on his living; the improvement of the farmers' living standard being the ultimate object of extension services.

Few of the farmers in the Malaya case study undertook any grading or selection and most sold paddy directly from the threshing floor and with a high moisture content. Those selling paddy from a store received a premium of 10 per cent or more because better drying was assumed. In Korea some of the small farmers interviewed, needing cash urgently, harvested and sold rice before it was ripe. Presumably, it was considered advantageous as against trying to obtain credit. If they are going to take the trouble to eliminate such ground for deductions in the price paid, the farmers must be fully aware that an incentive in the form of a higher price is available, be convinced that it covers more than the extra cost of extra drying, for example, which may delay sale and certainly entails some loss in weight, and must receive instructions on how best to meet these market requirements. A tendency to return to home-pounding of paddy has been observed in Indonesia where the rice mills are subject to strict government control,avoidance of this channel enables the farmer to sell at a higher price on the free market.

The Thai study did not indicate how far poor preparation of the sales lot by the farmer reduced his returns, but emphasized the distance from the wholesale market and the general need to assemble many small lots from individual farms by boat or road vehicle. A relatively strong position of farm sellers as regards means of transportation available was evident from the Pakistan study where 44 per cent of wheat sold was moved directly from farms to markets by bullock carts and 25 per cent by motor truck. In Taiwan, with a relatively well-developed transport system and short distances to traverse, transport difficulties in marketing were considered minor. On the other hand, presumably because of shipping difficulties, the price of rice on the Island of Lombok during 1962, was said to be less than one quarter of that on the free market in West Java. It was only recently, when roads were built in some otherwise inaccessible areas in Southern Philippines, that farmers there could abandon purely subsistense crops and begin to grow for the market.

Vigorous steps have been taken in a number of countries to expand and improve storage facilities for farm products. Still lack of suitable storage does reduce to a certain extent the return to the farmer for his crops. The risk of deterioration and physical losses is most significant when a farmer wants to hold grain in his own buildings to take advantage of higher prices later in the season. It can also arise just after harvesting; some Malayan farmers, for example, received low prices in 1963, due to germination of paddy left out in the rain. For the many who cannot afford to wait for probable seasonal improvements in price, because they need cash immediately to meet accumulated obligations, the main issue is lack of access to a type of storage which will enable lending agencies to accept grain placed therein as a security. Both suitably situated and managed stores and a recognized easily workable system of negotiable warehouse receipts are needed. The Korean local warehouse construction and rice lien loans program now appears to be achieving some success in this direction.

It is generally held that farmers are in a weak bargaining position with the wholesale buyers in determining the price at which their crops are sold. Among the reasons for this are (a) lack of adequate market news service and (b) indebtedness to the buyers. Only 11 per cent of a sample of rice farmers in the principal rice producing provinces in the Philippines reported having obtained price information from a reliable independent or official source.[1] Two per cent depended on neighbors, 76 per cent on buyers, 9 per cent on landlords and 2 per cent on rice millers. In one province similarly surveyed not one single farmer reported having obtained price information from independent sources - even though newspapers carried price information on rice for the principal markets in these provinces. All of the Malayan farmers interviewed knew the government minimum price for paddy, but quote private buyers as their only source of information on the current market price. One conformed to the extreme case of the farmer who did not know either the price or quantity of the paddy he sold, but allowed a local shopkeeper/creditor to take all his surplus. In Taiwan a third of the farmers interviewed on an island wide basis cross-checked such information with their local farmers' associations.

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[1] T. B. Bagullat, "Palay Marketing on the farm level in Nueva Ecija, Cagayan and Iloilo, 1955-56". Philippine Agriculturist, XIII (1), June, 1958, P. 28.

Information on the extent to which farmers' prices are reduced by inability to bargain because of indebtedness was not available from the case studies conducted. Several of the case studies gave the number and volume of sales affected in particular areas, but rarely the exact amount of the differential from free sale prices. Of the Malayan farmers interviewed 20 per cent had to buy rice for at least two months before the next harvest but only 7 per cent reported indebtedness to shopkeeper/rice traders at harvest time; in addition many obtained fertilizer on credit from a cooperative. In the Thai report over 15 per cent of the farmers said they were committed to moneylenders and a further group selling to land-owners and cooperatives were also committed—most probably to repay credit. In addition about 40 per cent selling to local buyers also gave credit as one of the main reasons why they did so. The most precise information on this topic appeared in the Burma study where out of 180 sales in 1961, 27 or 15 per cent were made in repayment of credit. This compares with 18 per cent reported for Burma as a whole in 1954 Agricultural Census. Most of this credit went to very poor farmers involving high risk with the loan amounting for an average period of 8 months to about half of the value of paddy to be delivered in repayment, i.e., an interest rate of 150 per cent per annum. For a two months advance on a standing crop about 10 per cent of the value was deducted. In China-Taiwan rice farmers obtain production credit mainly from the government which charges 1.2 per cent per month (less than the market rate of interest) and are then committed to deliver rice to it in repayment; about 7 to 10 per cent borrowed from relatives and friends. Pre-harvest sales to obtain advance payment are common in Iran, covering 25 per cent of the wheat sold in the Gorgan area, though more common with fruit. The advance price in Gorgan was 3.75 rials per kilo as against 6 rials for spot wheat.

The above instances clearly indicate the need for advice and guidance to farmers and traders on methods of preparation of the produce for the market, transport, storage, market news service, sources of obtaining credits, etc.

Some of you are perhaps aware that a Technical Meeting on Marketing in Asia and the Far East, sponsored jointly by the Food and Agriculture Organization of the United Nations and the Economic Commission for Asia and the Far East was held at New Delhi, India in April/May, 1959. The meeting was attended by 31 participants and 3 observers representing 8 Asian countries. The purpose of this Meeting was to provide avenue for a general stock-taking and discussion of the relative effectiveness of various marketing improvement programs in the region.

The Technical Meeting on Marketing recommended that agricultural marketing extension work both at the farm level and in the various markets in all the countries of the region should be undertaken. Emphasis should be laid on focusing the attention of farmers and traders on the proper preparation of agricultural products for the market, on cleaning, sorting, handling, transporting, storaging, packaging, etc., to minimize waste and raise quality and thus improve the value of the crop. Information on the various channels of sale, on the sources of credit available and the terms on which it should be sought were other important fields for advisory and demonstration activity.

Extension Services in the Region

Although agricultural extension services are functioning in many countries of the region, marketing extension work is being carried on in a few, as for example, Japan, India and China-Taiwan. Even in some of these countries the present status of marketing extension leaves much to be desired. The marketing extension work in India is being carried out in some regulated markets. The Directorate of Marketing and Inspection in that country, however, plans to supplement this service through village level workers in the community project areas and the district marketing staff. This type of work attracted more attention as a result of the recommendation made by the 1959 Marketing Meeting. A Marketing Extension Section has already been established in the Directorate of Marketing and Inspection with a view to prepare material for the extension workers. Some of the states have also taken steps to provide special staff for the purpose, whereas in others this work is being carried out by the existing agencies. As marketing extension is a specialized job the staff handling this work needed some orientation. To fulfill this object the Directorate of Marketing and Inspection started a monthly newsletter in June 1964.

In China-Taiwan extension work is being done through the farmers associations. The latter generally consist of a separate section designated as agricultural extension service. Its work is mainly educational to teach farmers new knowledge and techniques to increase production and improve marketing efficiency. It works closely with the other services of the association including marketing. Hog marketing in Taiwan, perhaps, is one of the most successful activities of the farmers' associations.

The extension service in Japan has quite a long history. During the prewar period it was performed mostly by agricultural associations by means of the government subsidy and functioned mainly to convey the governments instructions to farmers. The new extension service modelled after the American system was introduced in 1948 under the Agricultural Improvement and Promotion Law, later on redesignated as Agricultural Bureau and also established in the Ministry of Agriculture and Forestry. In fact it was a corollary, intended to help the newly established owner-farmers in the implementation of agricultural land reforms in 1946. The extension service commenced its work with a regular staff of 6,500 farm advisers to be augmented with the appointment of home advisers and subject matter specialists. The total number of farm and home advisers was 12,000 in 1957, plus another 600 subject matter specialists.

Farm advisers tender advice or guidance to farmers through daily contact while subject matter specialists feed the advisers with the required know-how. Thus, the results obtained in the experiment and research institutions are passed on to farmers through specialists and advisers, while problems raised by the farmers are referred to the institutions through the specialists for solution. In other words it constitutes a two-way traffic.

Various methods are used for extension work. These include home-to-home visits, demonstrations and experiments, round-table talks, exhibitions, fairs, shows, printed matter such as leaflets and pamphlets, slides and motion picture, wired or wireless radio, etc. Extension work is also done through rural youth Clubs and 4-H Clubs.

Identification of Marketing Program Areas Within The Framework Of Extension Services

Extension services in most of the countries in the region confine their activities to plant production and protection. If these programs are to achieve the desired objectives the extension services should take measures to motivate the farmers: the latter can be accomplished by providing economic incentives including better returns to the farmer for his produce through improvement in the marketing system. Thus the extension services must move out of the originally established or recognized boundaries to serve farm people more effectively.

The marketing extension services should strive at:

a. Creating greater efficiencies in processing, handling and distribution through the application of new technology and improved marketing practices;

b. Expanding the market for farm products through consumer information programs and by helping farmers and processors as to the consumer demand;

c. Guiding the market operators in developing efficient market organization and facilities;

d. Developing better understanding by consumers of the importance of timely buying and the suitability of various products for different uses;

e. Making rapid adjustments by farmers, consumers and the marketing agencies to changes in technology, supply and demand through better understanding.

The marketing extension program should include the following:

a. Providing information to farmers to help them with decisions as to what to produce, when to produce and where and how to market their produce. This should include consideration of the role of cooperatives in the improvement of agricultural marketing.

b. Providing consumers with information about quantity, quality, grades, supplies and prices of commodities, to help them decide what, when and where to buy the agricultural products.

c. Helping to develop a marketing system in which each service is performed efficiently and information carried quickly and accurately through the system from consumers to farmers and vice versa.

d. Encouraging adequate and fair competition among buyers to ensure fair returns to the farmers.

e. Acquainting the farmers with the marketing services and facilities available, e.g., market news, facility loans, inspection services, grading services, etc.

Implementation of the Marketing Extension Program

There appears to be a general recognition of the need for agricultural marketing extension work both at the farm level and in the various markets in the region for improving marketing efficiency. Although quite a large number of countries have in recent years established agricultural extension services under bilateral aid and technical assistance program of FAO, marketing extension work has not received the attention it deserves due partly to the lack of trained personnel. Consequently the marketing improvement work carried out by various national marketing organizations has been limited in its effect by the lack of understanding in the trade and at the farm level. In order to enable the extension workers to explain the advantages of new facilitating services such as market information, grading, control of quality, market regulation, etc, it is necessary for extension services to establish a marketing wing consisting of a number of qualified marketing specialists in order to ensure that marketing knowledge needed is passed on to the extension workers who are in regular contact with farmers and traders. Marketing extension can thus help to reduce marketing cost and the need for wide marketing margins to the advantage of both the producer and the consumer.

In certain countries in this region where marketing and extension services are in the initial stages, it may not be possible to organize a seperate marketing wing in the extension service particularly due to the lack of trained personnel. Under such circumstances it would be advisable for both the services to work in close cooperation with each other. The marketing organization should provide the necessary training in the field of marketing to the extension workers so that they should be equipped with the elementary knowledge to use it in their contacts with the farmer. In Iran, for example, the FAO Marketing Specialists have been regularly participating in the annual training classes of extension workers with a view to acquaint them with the elementary principles of marketing and the simple and straight forward methods which the farmers could adopt to improve the quality and value of their produce.

Since quite a substantial number of farmers in the region are still illiterate, mainly visual and audio-visual and including demonstrations is considered the desirable medium of approach. Propaganda and publicity might also take the form of newspapers, pamphlets and handouts couched in popular language. The use of radio, grammophone-records, films, cinema slides, etc. is another essential medium of approach. Cooperative institutions in many countries and regulated market committees as in India and Pakistan can help by educating the members and the producer-sellers in good marketing.

Pilot Projects

In order to test the usefulness of a given solution to a marketing problem in the developing countries and also to convince the interests concerned, including the administrator and the policy maker, it is often advisable to try out a likely solution in a pilot project. In this way a new method of handling, packing or storing a certain product is introduced on a limited scale, and given a chance to prove itself without risk of serious loss. Similar approach can be applied to project for substituting new types of market structure and pricing machinery for traditional small-scale trading operations. All the succesive marketing operations can be reorganized simultaneously in a limited area which will be regarded as an experiment model for the rest of the country and possibly for other products. The range of coverage can then be extended where the pilot project has proved successful.

The Bombay Milk Marketing Scheme involving the removal of small dairymen and the milch cattle from within the city to the Arey Colony outside, and the establishment of new unified pasteurization, transport and distribution services to market all the milk began as a pilot project. Subsequently it has become a model for other big cities.

In addition to proving the practical worth of a new approach to its sponsors, successful application has a great value as an object lesson to those who doubt it. The surest way of convincing traders of the advantages of a particular method is to show that it can be of value under conditions with which they are familiar. Meanwhile the staff involved in the pilot operation gain valuable experience and provide the nucleus of trained advisors and leaders who are so essential for success in its subsequent extension.

Projects likely to effect adversely certain interest such as those of monopolistic traders may require governmental authority, specific enabling legislation etc. In this case careful attention should be given to publicity and the power of public opinion. The marketing sector chosen should be one where existing arrangements are especially defective, so that both producers and consumers would support a radical reform, the more so where both could hope for more favorable prices as a result.

In the Nanded Market of the erstwhile Hyderabad State in India there was such an opposition to the introduction of regulatory measures that the entire merchant class shifted to an area a few miles outside the municipal limits, put up temporary stalls, to avoid compliance with the regulations of the Markets Act. Ultimately it was due mainly to the influence of the public opinion both producers and consumers, that the merchants had to reverse their decision. This pilot project later on became a model for other assembly markets in the State.

Developing countries which generally lack in technically trained personnel and equipment can make use of the international organizations like FAO for initiating certain pilot projects. Under the FAO's Freedom-from-Hunger Campaign there are some donors in the developed countries ready to consider projects likely to result in improved efficiency of the marketing system, e.g., transport of perishables such as fruit and vegetables.

For your benefit a very interesting article "How German advisory workers are helping farmers adapt to new marketing systems" is appended to these lecture notes. It will give you an idea about the importance of marketing extension service in a developed country like West Germany.

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APPENDIX I

MEETING MARKET REQUIREMENTS

How German advisory workers are helping farmers adapt to new marketing systems

K. Winzer
Deputy Manager of AID
Bad Godesberg, Germany

For centuries farmers worked their land and kept their livestock with the aim of meeting the demands of their own families living on the farm, and paying the cost of hired farm labor, by farm consumption or off-farm sale of crops and livestock products. A gradual increase in the sales of goods eventually changed agriculture from a predominantly self-sufficient industry to one geared primarily to the demands of the market.

Farmers in the Federal Republic of Germany today are basic producers forced to pay attention to the facts and laws of marketing. They manage their farms with the objective of achieving the highest cash profit possible.

To reach this point necessitated basic changes in farmers' ways of thinking and in the planning and management of their farms. For many years their main objective was simply to increase food production. Since the demand was extremely high, even high production costs were so obstacle. Whatever crop was produced could easily be sold at a profit. Quantity came before quality.

But during the past decade the situation has altered completely. The increasing integration of international markets, the great quantities of food imported, and the increased purchasing power of a large part of the population have changed the former seller's market into a market favorable to buyers. The farmer's customers have grown more exacting. They demand high-quality products, better preparation and processing, better packaging and presentation of the goods.

Diets have also changed. Consumption of foods rich in carbohydrates has decreased; instead, consumers prefer animal proteins, high-quality vegetables, and fruits.

Furthermore, the greater concentration of demand for foodstuffs now necessitates the consolidation of produce offers into wholesale lots. In Germany, some 1.2 million food producers, with their relatively small individual offerings face the concentrated demand of some 800 purchasing centers, which supply the entire retail trade in foodstuffs.

The market has thus become a powerful and vital influence on farming. To survive in agriculture today, a farmer must produce efficiently and economically — and in line with market requirements. When planning his operations he must bear in mind sales opportunities for his products.

In this connection, he may well take advantage of the advisory services available from the Ministries of Agriculture in the Lander and from the German Chambers of Agriculture. They provide counsel on production methods and on the quantities and qualities of produce that meet market requirements. Knowledge of local conditions, results of market research, and informed observation of market activities form the basis of this advisory work.

Training Farm Advisers in Marketing

In recent years, many farm advisers have had to acquaint themselves with the laws of marketing practices before they were qualified to advise farmers how best to meet market requirements. The Ministries of Agriculture of the Lander and the Chambers of Agriculture have paid particular attention to modern marketing problems in the regular training courses they conduct for farm advisers.

To give advisers an opportunity of exchanging their experiences in marketing work, national training courses on marketing problems have been conducted every two years since 1954, by the Agricultural and Home Economics Evaluation and Information Service (AID) on behalf of the Federal Ministry of Food, Agriculture and Forestry. AID also regularly tackles marketing subjects in its publication and information releases sent to farm advisers.

New forms of marketing are being developed in all the Lander of the Federal Republic. To assist farm advisers in keeping up with the changing market situation, AID has recently held two regional training courses — one in South Germany and the other in North Germany. They include lectures, discussions, and visits to new marketing facilities, all designed to give advisers a better background for counselling farmers on marketing.

Advisers Can Aid in New Forms of Marketing

The new marketing systems and arrangements for farm products are being developed both by cooperatives and by private business organizations. The farmer chooses the particular organization through which he wishes to market his products.

German farm advisers are cautioned against showing favoritism toward any marketing concern. Their job is to give independent advice to their farmer clients. The advisers examines the current marketing situation and makes recommendations calculated to serve the farmer's best interest in the specific case. The farmer, of course, is free to act on these recommendations or not, as he chooses.

However, farm advisers can also perform a valuable service as a link between farmers and marketing organizations, and they can assist groups of farmers to cooperate in order to better meet market requirements. This work by advisers aids both the farmers and the marketing organizations.

Such marketing arrangements normally involve agreements between producers and marketers concerning such details as varieties of crops or breeds of livestock, fertilization and feeding practices, quality and quantities of products, terms of delivery, and sometimes also prices. The farm adviser can assist both parties to these agreements in arriving at terms that are mutually advantageous.

Some of the earliest production and marketing agreements were developed for poultry. Similar arrangements were soon worked out for other products, including fruits, vegetables, and wine. They usually involve a guarantee to the farmer that his products will be marketed at a satisfactory price. Quite frequently, also, business-shares are issued, which further strengthen the farmer-marketer partnership.

The success of these schemes has depended on the establishment of mutual confidence between producers and marketers. Farm advisers have done much to promote understanding and trust between the partners in new marketing systems.

A considerable effort has been made in the Federal Republic during the past few years to produce, process, and market high-quality wheat in line with market requirements. These efforts have been supported by the government, which provided subsidies to encourage the formation of wheat-production communities. The agricultural advisory service helped to ensure that cultivation, fertilization, management, harvesting, drying, and storage resulted in a product that met market requirements.

Quite a number of producers' communities for the fattening of cattle and pigs have also been formed during recent years at the initiative of farmers. In general, they are concerned with the fattening of animals according to good farm management principles, obtaining regular advice in matters of feeding, continuous supervision of animal health and sanitation, and regular supply of the market with balanced lots of slaughter animals. Efforts are made to consolidate market offerings in order to sell in large lots.

In some areas, farmers wish to take an active part in processing their livestock products. The farm advisers generally do not encourage this tendency, because the creation of new processing capacity often does not make for more advantageous marketing. Instead the advisers promote work distribution. Although slaughtering and cutting may be done by producers' communities, processing into meat and sausage is normally done by private firms, which can also, if necessary, do the slaughtering.

The Farmers' Interests Come First

When advisory work in marketing was first considered, opinions varied as to how far advisers should go in this field. It is now generally agreed that assisting farmers to meet market requirements and to take best advantage of market conditions is an essential function of the advisory service.

Economic knowledge grows increasingly important for advisers and for farmers. To reduce costs of production and make most profitable use of their resources, most farmers are finding it necessary to expand certain operations and curtail others. There is a steady trend toward specialization.

To benefit most from such changes, farmers must make them with proper knowledge of market requirements, as well as knowledge of efficient production methods. The technical and economic facts of agriculture are interrelated, and both must be dealt with in providing adequate advisory services to farmers.

In addition to helping farmers produce profitably for particular markets, advisers should provide guidance concerning production and marketing agreements, and they can properly assist in schemes for vertical or horizontal integration, insofar as they are desirable from a marketing standpoint and profitable for the farmers concerned. But the adviser should not become involved as an adviser to, or trade partner in, commercial enterprises, for this would prejudice his position as an independent and unbiased counsellor of farmers.

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ROLE OF COOPERATIVES IN THE PHILIPPINE LAND REFORM PROGRAM

Pablo N. Mabbun, Ph. D.
Economist and Chairman of Livelihood and Coordinator of Research
The Philippine Rural Reconstruction Movement (PRRM)

Introduction

The present Land Reform Program of the Government of the Republic of the Philippines is outlined in the Agricultural Land Reform Code, otherwise known as Republic Act No. 3844, which became effective on August 8, 1963. As defined by the Government, the Program "is an integrated plan of action aimed at increasing agricultural production and easing the poverty of tenants. Its main objectives are to: (a) establish owner-cultivated farms and economic-sized farms as the bases of Philippine agriculture; and (b) encourage the landlords to invest in industrial projects idle capital tied up in land".

Land reform work is not new to the Philippine Government, because it started doing this in 1903 when some Friar Estates were purchased by it and sold in small parcels to the people who occupied or desired to buy land for themselves. This work was intensified in 1937 when the Government created the Land Settlement Administration and the Rural Progress Administration. The National Land Settlement Administration opened a vast area of public land in the Koronadal Valley in the province of Cotabato on the Island of Mindanao. This area was subdivided into lots of 6 to 12 hectares and settlers were brought to the settlement by the Government, each family of settlers being given a lot of 6 to 12 hectares depending on its size. The Rural Progress Administration handled the parceling and distribution of the Buenavista Estate, consisting of about 27,000 hectares, which the Government bought from San Juan de Dios Hospital. The parcels of this Estate were sold to the tenants then occupying the land payable on a long-term annual installment basis. Subsequently other measures were adopted which tended to improve the security and income of tenants. Examples of these were the Tenancy Law that increased the share of croppers (share-tenants) to 70 per cent of the harvest, the landlord getting the remainder, 30 per cent, the law that created the Tenancy Commission, the law that established the Land Tenure Administration and the law that created the Court of Agrarian Relations. But the present Land Reform Program emphasizes the improvement of the lot of the share-tenants.

Land reform is said to be necessary in the Philippines because agriculture dominates the economy of the country and a considerable portion of the total farm area is tilled by tenants. In fact, about 37 per cent of Philippine farmers are tenants. It is also believed that the root cause of the low productivity and inadequate income of the tenant is the share-tenancy system that has existed for generations. It is observed that once a farmer is a share-tenant it is likely that he will die as a share-tenant and so will his children. Since the greater portion of any increase in his production goes to his landlord, the tenant does not have the incentive to produce enough to provide the minimum requirements of food, shelter and clothing for himself and his family. He is said to be caught in a vice as it were with poverty and dependence pressing him on one end and lack of opportunity and incentives to rise above his status on the other.

It is mainly to provide specific measures, funds and a well-knit and integrated government organization to increase the productivity and income of farmers and to make share-tenants independent, self-sufficient owner-cultivators that the present Land Reform Program of the Government has been launched. In fact, the Program specifically provides incentives for increased productivity, liberal credit facilities, proper guidance in farm management, marketing facilities and farm implements, seed and fertilizer supplies to enable the share-tenant to become an independent and efficient owner-cultivator.

The Land Reform Program outlines two steps that enable the share-tenant to increase his productivity and income, as well as lead him to become an independent owner-cultivator. The first step is to make him a lessee of the land he tills. As a lessee he pays a fixed rental to the landlord and the entire produce of the land becomes his. The share-tenant becomes a lessee of his holding when the Government has declared the area within which he is farming a Land Reform Area. The second step is to make the share-tenant an owner of the land he has leased. The Government, through the Land Authority, buys from the landlord all the lands declared as Reform Areas and leased to share-tenants, in excess of 75 hectares. The lands will be divided into family-sized farms and each farm unit will be sold to a lessee to be paid to the Land Bank by installment over a period of not more than 25 years. The Land Bank pays the landlord for the expropriated areas. It is expected that as a lessee and eventually an owner, the share-tenant is encouraged to produce more because any increase in the produce of his farm goes entirely to him.

The farmers in the Land Reform Areas are assisted by government agencies, which extend to them various services. The most important among these are the Commission on Agricultural Productivity (CAP), the Agricultural Credit Administration (ACA), the Agrarian Counsel (AC) and the Court of Agrarian Relations (CAR). The ACA will help the farmer by providing him with adequate loans to meet his financial and other requirements for production. The CAP will assist him in preparing his farm program and in determining his financial requirements, as well as help him organize barrio associations through which loans from the ACA are issued to the farmers. The Agrarian Counsel will assist the farmer free of charge before the Court of Agrarian Relations in case he has any problem in the Court regarding his farm. The Counsel will especially help the lessee fix the rental he will pay the landlord for the use of the land. The CAR is a Court of Law which will be recognized to ensure the speedy adjudication or settlement of cases brought before it under the Agricultural Land Reform Code and other laws and regulations.

With the foregoing rough outline of the Philippine Land Reform Program in mind we will now discuss the Role of Cooperatives in helping implement it successfully. There are three possible main functions that cooperatives may contribute towards the successful implementation of the Land Reform Program, namely: (1) serve as instruments through which loans are issued to farmers; (2) serve as agents for the orderly and efficient marketing of farm products; and (3) serve as agents to procure and distribute farm supplies at cost to farmers.

Provision of Credit to Farmers Through Cooperatives

Farms in the Philippines are small, the average area of farms operated by their owners being less than 4 hectares (3.7 hectares) and that of farms cultivated by tenants only 2.5 hectares. Most of these small farms are operated on subsistence basis, consequently the farmer can not save. Since he has no savings, he depends very largely on credit to enable him to continue to operate his farm from one crop season to another. He usually obtains loans from the storekeeper in the vicinity of his residence or from middlemen trading in farm products, if he is an owner-cultivator or from his landlord, if he is a tenant. He repays these loans in crops after harvest time. He generally pays very high rates of interest on the loans, since his creditor places a low value on the products used for repayments. In most cases owner-cultivator employs the greater portion of the produce of his farm for the repayment of his loans, thus making him a "mere employee" of his creditors.

The position of the share-tenant, the improvement of whose economic lot is the main concern of the present Land Reform Program, is even worse than that of the owner-cultivator. Because his share of the produce of his landholding is from 50 per cent to 70 per cent of the total harvest, he therefore does not have enough to repay his entire loan in a crop season at harvest time. There is always a portion of an old debt that remains unrepaid after every crop season. This unrepaid debt accumulates every crop season, so that once indebted the farmer remains in debt for life. His children often inherit the farmer's debt. That is why it has been said that once a farmer has become a share-tenant, he dies as a share-tenant and so with his children.

The architects of the Philippine Land Reform Program seem to understand this situation under which the share-tenant works. The Land Reform Code directs the CAP to help the farmer determine his financial requirements and it requires the ACA to provide the farmer with adequate credit to meet these requirements. The Code moreover authorizes the CAP to help the farmer organize barrio associations which will serve as agents through which ACA will issue loans to the farmer.

The farmer needs loans for various purposes, among which are to repay his old debt, to meet his expenses in production, in marketing his produce, and emergency needs, and to pay for his and his family's subsistence. It has been stated above that at harvest time the farmer (referring particularly to the share-tenant) can not repay the entire amount of loans he has contracted during the crop season. So that there is a portion of old loans not repaid at the harvest of a crop, and this unpaid portion of old debts accumulates. If this is not repaid, the farmer will be tied up in debt and will be under the control of his creditors. This old debt, therefore, must be repaid, if the farmer is to be free to use his best judgment and initiative towards increasing his productivity and income when he becomes a lessee of the land he tills under the Land Reform Program. To ensure the repayment of this old debt, the CAP should take it into consideration when it helps the farmer determine his financial requirements.

The farmer also needs adequate loans for production and the other purposes enumerated above. He needs funds to buy certified seeds, fertilizers, farm supplies, feeds for swine and poultry, and farm implements. He has to have funds to purchase the subsistence needs of himself and the members of his family and to meet his emergency needs. To ensure the provision of loans adequate enough to meet all of these requirements, a careful study of the credit needs of the farmer is important. Under the Land Reform Program this job is assigned to the Commission on Agricultural Productivity.

The provision of adequate loans to the farmer is important, but it is equally important that the proceeds of the loans are effectively used for the purposes they are needed. It is believed that the provision of loans either directly by or through cooperative is very effective. Let us now discuss this.

Loans Through Cooperatives

It is said that in theory cooperative credit institutions are the best possible form of credit institutions for the small farmers, like the farmers in the Philippines. Close local knowledge, which is the main essential to the success of banking and the lack of which is the most frequent cause of failure in agricultural banking, is inherent in the usual cooperative structure of primary societies, local unions and central associations, each higher unit of which is normally built up from the local associations below. In practice, however, there have been many failures in cooperative agricultural financing. The basic cause of this is often the attempt to develop a cooperative credit organization among farmers who do not understand the basic principles of the cooperative. Too often the farmer has been encouraged to run before he has learned to walk, and it must be admitted that the farmer is usually very slow in learning to walk securely. Development, such as that envisioned in the Land Reform Program to be safe, must inevitably be slow, and constant advice and friendly and helpful supervision will be necessary.

Under the Land Reform Program, as already stated above, the Commission on Agricultural Productivity (CAP) helps the farmer prepare his farm program and determine his financial requirements. The CAP is also responsible to assist the farmer organize barrio associations through which the ACA issue loans to him. Both of these functions of the CAP not only insure that the farmer will be given adequate loans but also favor the supervision of the use of the proceeds of the loans in order that he may realize the maximum benefits from them. The barrio cooperatives are believed effective instruments to help the ACA and CAP to achieve these ends. These barrio cooperatives can do this in the following manner:

1. **By helping in the preparation of the farmer's farm program and in the determination of his financial requirements.** The barrio cooperatives are presumed to be organized by the farmers within areas proclaimed by the Government as Land Reform Areas. Only one cooperative should be organized in each barrio for purposes of providing credit to the farmer. The members of a barrio cooperative should know one another very well, since they all live in the same barrio. The cooperative should have a Loan Committee of three members elected from among the most respected far-

mers in the barrio. The members of this Committee should be consulted when the CAP personnel help the farmer to prepare his farm program and determine his financial requirements. They will be helpful, for instance, in giving reliable information regarding production per hectare in previous crop seasons, area cultivated by the farmer, expenses incurred in performing each of the farm operations scheduled on his farm program, prices of farm products in previous years, character of the farmer, his old debt, willingness to follow his farm program, etc. Correct information about these items is necessary not only in determining the financial requirements of the farmer but also of his capacity to repay loans extended to him. It is important that the correct amount of his financial requirements is known because this will prevent the granting to him of credit which will be either too much in relation to his needs or too little to do him much good. If the farmer is given loans in excess of his actual needs, he will likely be careless and extravagant in using the proceeds of the loans. On the other hand, if he is given too little in relation to his actual needs, he will not be able to perform all the farm operations scheduled on his farm program. Under either conditions the farmer will find great difficulty in repaying his loans. He must, therefore, be given the correct amount in loans to enable him to increase his productivity and income, thereby making it easy for him to repay his loans.

The members of the Loan Committee of the barrio cooperative can also help the CAP personnel in scheduling the farm operations to be included on the farmer's farm program, since they are experienced farmers themselves. They will be helpful in determining the expenses required to perform each of the said farm operations, thereby contributing to the determination of the correct financial needs of the farmer.

2. **By assisting in supervising the use of loans extended to the farmer.** The Land Reform Program directs the Agricultural Credit Administration (ACA) to provide the farmer with adequate loans to meet his requirements. Loans are granted to the farmer by the ACA on the basis of his expected production and his promise to follow an efficient farm program. The barrio cooperative can help the ACA achieve this and through its Loan Committee. After the farmer has prepared his farm program and determined his financial requirements, he applies for a loan from the ACA. Attached to his loan application are the farmer's farm program and a budget based on his farm operations. The amount of the loan applied for will depend upon the balance left out of the estimated income from the farmer's expected production, after deducting from it his total expenses in producing the crop. The amount of the loan should include the sum necessary for the repayment of the farmer's old debt.

The loan application is submitted to the ACA and a copy of the same is furnished to the Loan Committee, whose members perform the initial processing of the application. The members of this Committee must check the capacity of the applicant to repay the loan applied for, his character, willingness to follow his farm program religiously, and other items that ensure the repayment of the loan. After processing the application, the Loan Committee submits its recommendation to the ACA, which processes the application further. The Loan Committee, for record purposes only, informs the board of directors of the barrio cooperative about its recommendation regarding the loan application.

When a loan application is finally approved by the ACA, the members of the Loan Committee should be present when releases of the proceeds of the loan are made to the borrower. This is neccessary in order to prevent any possibility on the part of the farmer (borrower) to misuse any part of the loan extended to him. In this way, the barrio cooperative assists the ACA in applying the supervised system of credit to the loans it provides the farmer. The members of the Loan Committee of the barrio cooperative can also see to it that the farmer follows his farm program and perform the farm operations scheduled on it. This assistance is necessary to ensure the effectiveness of the use of the proceeds of the loans granted to farmers. It also allows the field staff of the CAP and ACA to devote more time giving advice and technical guidance so necessary to enable the farmer to increase his productivity and income, consequently his standard of living.

3. **By helping in the collection of loans.** The barrio cooperative can help the ACA in the collection of the loans it extended to the farmer. Knowing its members intimately the cooperative is in the best position, through its Loan Committee, to know when the farmer is best able to repay his loans. The cooperative is also in the best position to know why the farmer has failed, if he did, to repay his loans. The Loan Commitee of the barrio cooperative can therefore supply the ACA and the CAP with reliable information which may be used as a basis for scheduling the repayment of loans, either in lump sum upon maturity or on installments, and in the actual collection of repayments of loans.

4. **By providing loans to the farmer from their own funds.** The barrio associations should eventually be able to accumulate enough deposits from their members out of which they will extend loans to meet the financial requirements of these farmers. While it is perhaps a good step for the Agricultural Credit Administration to provide the farmer with adequate loans in the initial years of the operation of the Land Reform Program to meet his financial requirements, it is a sound policy to encourage and educate him to become eventually independent financially. As the productivity and income of the farmer increase, through the implementation of the Land Reform Program, he should be able to save a small part of his income every crop season. This saving should be deposited with his barrio association. When the deposits from members have accumulated in an amount large enough to warrant the granting of loans, the association should begin extending this service to the farmers. Such a service should be continued with the view to have it eventually supersede the same being extended to the farmers by the government, through its financing agency — the ACA. This is a slow process. But with the support of the Land Reform Authority, the farmers should be encouraged and educated to attain financial independence. I believe this should be the ultimate goal that the Land Reform Program desires to achieve. This provision of credit to farmers by their own cooperatives is successful in various countries, notably in Japan, Denmark, and Switzerland. The service is also being spread steadily in the barrios being assisted in their development by the Philippine Rural Reconstruction Movement (PRRM).

In each of these barrios a credit cooperative, popularly known by the barrio people as Credit Union, is being developed. The barrio credit union extends loans to its members to meet their financial requirements in the production of crops raising, swine and poultry, etc. The credit unions are contributing much towards the improvement of the productivity and income of the farmers in the barrios where PRRM rural reconstruction workers are assigned. The barrio associations which the Commission on Agricultural Productivity (CAP) helps to organize in the Land Reform Areas, can become the main sources of credit needed by the farmers in the long run.

Cooperative Marketing of Farm Produce

Cooperatives can assist in the successful implementation of the Philippine Land Reform Program by serving as agents in the orderly and efficient marketing of farm produce. It has been stated that adequate credit, when properly and wisely used, enables the farmer to increase his productivity and income. Wise use of loans may increase the productivity of the farmer. But, if he is not assured of a stable market where he can sell his produce at regular market levels, his increased production might not bring him increased income. This situation is generally observed in the marketing of farm products in the developing countries, including the Philippines.

Merchants (usually called middlemen as a class) generally control the marketing of farm produce. They dominate marketing practices because of the absence of organized marketing system by the farmers and also because of the link between credit and marketing farm products. The farmers sell their products individually and in competition with one another. Their bargaining position is therefore very weak in dealing with the merchants. As a consequence they receive for their products very much below those of normal market levels.

The merchants moreover purchase the farmers' produce long before the crops are harvested. This is done in two ways. One group of the merchants consisting of shopkeepers, who establish their stores at strategic places in the barrios, allow credit on a day-to-day sales of food and other consumers goods repayable in farmers produce. These shopkeepers place a low value on the produce used by farmers to pay for goods on credit. The shopkeepers are said to reap enormous profits (from 100 to 250 per cent per annum) from these credit transactions. Another group of merchants consists of traders or brokers dealing in agricultural products. They make advances on standing crops at high rates of discount. The advances are sometimes conditional on the whole crop being sold to the person making the advances. In most cases, the farmers have to do this because they do not have storage facilities for their crops after harvest. This system of advances is very oppressive to the farmers. They do not only lose the opportunity of selling their produce at the regular market prices, but in the case of food products they are also sometimes forced to buy back what they have used for repayment of advances at much higher market prices a few months after harvest. Moreover, the farmers can not enjoy the benefits derived from selling their produce on the basis of quality, since the merchants who had given them advances on their standing crops had placed only one discounted value to the produce they accepted for repayment. These conditions do not give the farmers a chance to improve their lot. However, cooperative marketing of farmers' produce can help to correct the above discouraging situation through the performances of the following functions: (a) orderly marketing of farm produce and (b) pooling.

It has been stated earlier that barrio associations are organized by farmers through the help of the CAP, within areas declared by the Government as Land Reform Areas. It has also been stated that these barrio associations are organized primarily to serve in providing adequate loans to the farmers participating in the implementation of the Land Reform Program. These barrio associations can be federated into Municipal Federations and then the Municipal Federations into Provincial Federations for purposes of efficient marketing of the farmer's produce. The federations are necessary to get sufficient volume of produce for economical and efficient operation. Let us now discuss the performance of the functions mentioned above through cooperative marketing of farm produce.

1. **Orderly marketing of farm produce.** Orderly marketing means the releasing of just enough quantity of a given supply of a commodity for sale at the market from time to time to meet the actual demand of buyers. The objective of controlling the supply in a given market is to prevent abrupt fluctuations of the price of the commodity. The success of this scheme will depend upon the control of the bulk of the total supply of the commodity by the cooperatives, the presence of adequate storage facilities and the availability of adequate financing to meet the demand of farmers, who own the farm produce, for cash while waiting for the final disposal of their produce.

Since the present Philippine Land Reform Program is concerned mainly with the improvement of the lot of the share-tenant, the farm produce involved in the program is mainly rice. There is a good local market for rice, in the Philippines, since the country's production of this staple is still insufficient to meet domestic requirements. Provided local rice producers are given adequate tariff protection, cooperatives that have control of a substantial portion of the total expected supply in a given local market have a good chance to stabilize the price of this staple in that market through orderly marketing.

There are ready warehousing facilities that can be used by the Land Reform Program. The former Agricultural Credit and Cooperative Financing Administration (ACCFA) has financed the construction of warehouses in most towns in the rice-producing provinces. Most of these warehouses are still in good condition. Besides warehouses, the ACCFA also financed the establishment of rice mills. The Land Reform Authority can make arrangement with the Farmers Cooperative Marketing Associations (FACOMAS) in towns declared as Land Reform Areas so that these marketing facilities may be used by farmers therein. The warehouses may be used for depositing the marketable portion of their harvest every season and the rice mills to process the palay into clean rice for direct sale to buyers. With warehouses, cooperatives will be able to regulate the flow of farm produce to the market and thereby stabilize prices at reasonable levels which are advantageous to the farmers.

Regarding financing, the Land Reform Authority is assured of adequate funds to carry out the Land Reform Program successfully. Funds needed by farmers to meet their immediate needs may be advanced to them by the ACA, while they wait for the final disposal of their produce by their cooperatives. The advances may be considered as short-term loans repayable by deducting them from the sale of produce deposited by the farmers, who received the advances, in warehouses operated by the cooperatives. Those who got advances will therefore receive only the balance of the sale price of their produce, after the advances have been deducted from it.

2. **Pooling of farm produce.** Pooling is a system of marketing, generally used by cooperatives, whereby the farmers' produce are comingled into lots of groups according to class or variety and sold during a definite period. After deducting marketing expenses, farmers are paid for their products on the basis of the average net selling price per unit in the pool. The pooling system can be conveniently used by the federated barrio associations in the marketing of rice. It is presumed that standard grades or varieties of rice are established and these must be the guides or bases for comingling them in pooling. It is presumed also that the volume of produce contributed by each member of the pool is known, through a marketing agreement signed by him with the cooperative organization operating the pool, authorizing the latter to sell his product at any time, place and price it considers advantageous to itself and the member.

Pooling enables the cooperatives to produce the quality of products which the consumer demands. It also spreads marketing risks, because instead of every producer bearing these risks as is the case in the usual way of marketing farm produce by the individual farmer, all pool members bear pro-rata each risk. Through pooling the cooperative organization handling the marketing of farm produce can market the products according to the best time and place to sell and thereby preventing ,the dangers of gluts in the market which result in depressed prices. Pooling furthermore enables the cooperative organization marketing commodities to finance its operations more easily, since the products in the pool become the security for loans obtained from credit institutions, like the ACA. The credit gives the cooperative organization withholding power which is important in establishing prices advantageous to the producers. The cooperative, in turn, can advance to the members of the pool a portion of the current market value of their produce deposited in the warehouses, such advances to be repayable by deducting them from the actual sale price of the produce, as already stated above. Finally, when the cooperative organization handling the marketing of farm produce controls a substantial portion of the total output, as already stated earlier, it becomes an important factor in determining the price of the product in the pool.

3. **Reducing cost of marketing.** Under the usual system of marketing where two or more middlemen handle farm products on their way from the farmer to the consumer, the cost of marketing can be high. The barrio associations organized by farmers in Land Reform Areas can reduce the costs of marketing farm produce. Cooperative marketing can

reduce the number of hands through which farm products will pass on their journey from the farmer to the consumer to only one, and thus reduce marketing cost. In this case the cooperative handling the marketing of the products is the only middleman between the farmer and the consumer.

Costs of marketing can also be reduced by the cooperatives by relying heavily on the voluntary services of their members. But this is only true where the members are experienced and perform the work efficiently. It may be a doubtful saving, however, where the members are inexperienced and perform the work badly. The cooperatives can also reduce cost by relying on the services of government officials paid from government revenues rather than cooperative receipts, as has been done by the Agricultural Credit and Cooperative Financing Administration (ACCFA) when it paid part of the salaries of Treasurers of FACOMAS. But the dangers and limitations of this procedure are obvious.

Cooperative Purchasing and Distributing of Farm Supplies

Sound arrangements for land tenure, technical progress and improved credit facilities require to be supplemented by substantial reduction in the prices charged to farmers and their families for the goods and services they buy. If charges for fertilizers, improved tools, and other factors of production remain high, the full effects of other policies favorable to increasing farm production and rural prosperity can not be achieved. Nor is the greatest possible prosperity achieved if consumer goods and services are not efficiently distributed.

Prices now charged for both producers' and consumers' goods and services in the rural areas are generally high because farms are small, and in many localities, scattered, so that the real costs of selling and distributing to them are heavy. Prices are also high because, especially where transport facilities are poorly developed, farm families' incomes are low and business training available to only a few, merchants do not fully compete with one another but in greater or lesser degree enjoy local monopoly powers. They may even form local "rings" to augment such powers. These powers, too, are often all the greater because these merchants are not only shopkeepers, but also money-lenders providing ready cash for consumption as well as production purposes and the buyers to whom the farmers are committed to sell their produce.

The real costs of goods and services to farm families may also be kept high by adulteration and faulty description. The quality of seeds, fertilizers, feeds, and other factors of production can not be fully judged by eye and therefore merchants tend to provide qualities lower than those most appropriate from the farmers' standpoint. The quality of consumption goods is also often too low, and even adulterated.

Cooperatives have been found to have advantages over private traders, government trading units or statutory monopolies in attempting to overcome these various causes of high prices paid by farm families. The barrio associations organized by farmers in the Land Reform Areas can effect these advantages in favor of their members. By concentrating the demands of their members, these cooperatives can avoid some of the costs due to the scattered location of individual farms and the irregularity and small size of purchases by individual farmers. This concentration is said to be achieved at comparatively low cost. For instance, some of the administrative overhead costs of private traders or government arrangements can be avoided by the voluntary labor of members, and by their interest and loyalty to their own organization. Large discounts through this concentration of demands also mean lower costs of goods and services to members of the cooperatives. By keeping their members' interests uppermost in mind, the cooperatives can also go far in securing for their members goods and services of appropriate quality and, of course, correctly weighed and measured. Concentration of demands can also counter the monopoly powers of private traders, or serve to keep statutory monopolies more efficient. The cooperatives can be useful too in bringing to farmers within the Land Reform Areas new technical knowledge and information along with requisites bought.

Possibilities of Integrating Credit, Marketing and Farm Supply

The foregoing paragraphs described three functions that cooperatives can perform to contribute to the success of the Philippine Land Reform Program. These functions may be performed by different types of cooperative associations, that is, credit by credit cooperatives; marketing by cooperative marketing societies; and procurement and distribution of farm supplies by consumers cooperatives. Some thoughts have been given, however, to the integration of these functions in a single type of cooperative—usually called "multi-purpose" cooperatives. This new approach is exemplified by recent thinking on the subject, particularly in India and the Philippines, and by its evolution in the cooperative movement in Japan. This new approach has the following distinguishing features:

1. The realization of the intimate relationship between agricultural credit and the marketing of farm produce, and the need for a comprehensive and integrated approach to these questions. This need is emphasized by the realization that an integrated system can facilitate supervision of the use of credit as well as its repayment and can better withstand the competition of private money-lenders and traders. It is also recognized that favorable conditions for the successful functioning of such integrated credit and marketing structures can be created by keeping down the risks involved in trading, through appropriate organizational arrangements and those arising from natural hazards, through systems of crop insurance or the creation of special funds for this purpose.

2. An awareness of the fact that agricultural credit with judicious supervision of credit, is possible and ought to replace credit based on the security of immobile property. Through this principle alone access to institutional credit can be provided to the large number of small farmers, particularly share-tenants.

3. The general view that the cooperative framework provides the best means of placing agricultural credit on a sound footing, and also that governments concerned must assume major (or full) responsibility for provision of funds, organizational development and supervision of the movement. This is a significant departure from the past, when the cooperative movement was expected to depend mainly on local savings and

to develop largely by its own momentum, with governments rendering occasional assistance to keep the movement alive.

In general, it is these principles which are said to be likely the basis of the new structure of agricultural credit in India. In the Philippines the new approach is typified by the Agricultural Credit and Cooperative Financing Administration (ACCFA). This government financing agency channeled loans it granted to farmers and supervised the use of the proceeds of such loans through Loan Committees in every barrio covered by the Municipal Farmers Cooperative Marketing Association (FACOMA). The marketable portion of farmers' produce was pledged to the FACOMA in a marketing agreement and deposited at the FACOMA warehouse. Loans were collected by deducting their repayments from the sale price of each borrower's produce. Farm supplies were also procured and distributed to members by each FACOMA. Many of the desirable features of this ACCFA-FACOMA program can still be revived in the barrio associations to help in the successful development of the Land Reform Program.

In Japan, the well-developed cooperative movement has, in the course of its evolution, acquired most of the features referred to above. It has adopted an integrated approach to credit and marketing and its system of granting crop production loans on the security of crops (rice, wheat and barley) meets in substantial measure the short-term credit needs of farmers. It is encouraging to note that the granting of such loans in Japan today, where the majority of cultivators have ownership rights in land, raises practically no problems at all.

Some Problems that Cooperatives Encounter

The functions of cooperatives that can help towards the successful implementation of the Philippine Land Reform Program discussed above can only be performed efficiently if the cooperatives receive active government support and the members of the associations are loyal and understand cooperative principles and practices. Some of the problems encountered in performing these functions of cooperatives mentioned earlier are:

1. **The problem of securing adequate funds.** The Land Reform Program is being carried out with funds supplied by the government. The Agricultural Credit Administration (ACA) has inherited the funds and other assets of the former Agricultural Credit and Cooperative Financing Administration (ACCFA). There will also be funds from other government agencies involved in the Program, as well as from the Land Bank.

2. **The problems of supervision of credits.** A decision has to be made upon the contemplated scope of supervision of the use of credit and the agency that ought to take responsibility for this work. Since the Land Reform Program aims to increase the productivity and income of the share-tenant, the supervision of the use of loans should be linked with extension work. The Commission on Agricultural Productivity (CAP) therefore should take responsibility for the supervision of the use of loans granted to the farmers participating in the Program. The field staff of the CAP should be ready to give technical advice and guidance to the farmers, particularly in projects to which they (farmers) apply loans

obtained from the ACA. As already stated earlier, the members of the Loan Committee of each barrio association should learn from the field staff of the CAP what proper advice should be given to the farmer and how to give such advice. When the members of this Committee have become proficient in giving proper advice to the farmers in their own barrio, the CAP field staff can then devote their time to teaching new methods or techniques of production and other new things to the farmers.

3. **The problem of selection and teaching of personnel.** There is need of training a large number of leaders of the barrio cooperative associations in cooperative management, bookkeeping, cooperative principles and practices. Those who will be found good will be further trained for specific jobs in the cooperatives. But the education of the members to develope their wholehearted interest and loyalty to their cooperative organizations should be a continuous process. Education of the members, as already stated is so important to the success of the cooperatives that it can not be over-emphasized.

There is also a need for a large number of trained agricultural extension officers, administrators, supervisors, and others to meet the needs of the rapidly expanding areas declared to be Land Reform Areas. The Land Reform Authority has provided training centers, staff and equipment to take care of this problem. A word may be said here in connection with the selection of personnel. There should be a criteria established as a basis of selection. These criteria should provide minimum qualifications. Only those qualified by these criteria should be selected. Those selected should undergo proper training which should be practical and aimed at developing the skill of the trainee to be understood whenever he meets and talks with the simple farmer and the members of his family. This procedure will prevent the selection of persons who just want to occupy positions to enable them to receive the pay, but not to render services. Many beautifully drawn up programs of the government have failed to produce the desired results in the past, because of the careless procedure followed in the training and selection of personnel to implement them.

After the regular training of personnel of the Land Reform Program, this training should be continued from time to time in the form of in-service training. This will give the personnel the opportunity not only to discuss problems they encountered in the field but also to be up-to-date regarding administration policies and other matters that contribute to the successful implementation of the program.

4. **Problem of marginal and sub-marginal farmers.** There are farmers in Land Reform Areas who, because of the poor quality of the soil, may be marginal or sub-marginal. The rents they pay may be excessive, their accumulated debts may be beyond their capacity to repay. It may be necessary in such cases for barrio association officials to introduce a home industry, the raw material of which is available locally, such as bamboo craft. People in the barrio who have marginal and/or sub-marginal farms will be encouraged to engage in the home industry to augment their incomes. Or marginal and/or sub-marginal farmers

may be encouraged to engage in poultry or piggery projects, or raising crops that give quick income, such as mushroom culture, etc. The barrio associations should develop into credit institutions and help these farmers engage in supplementary productive projects by granting them small loans repayable after they have realized incomes from such projects. The barrio associations may also study the possibility of cooperative farming to reduce operating expenses of individual marginal farmers.

References:

1. ...., The Agricultural Land Reform Code (Republic Act No. 3844). Bureau of Printing, Manila, August 8, 1963.
2. ...., Annual Report of the Agricultural Credit and Cooperative Financing Administration (ACCFA) for Fiscal Years 1959-1960 and 1960-1961.
3. FAO/ECAFE, Agricultural Division, "Credit Problems of Small Farmers in Asia and the Far East." Bangkok, 1957.
4. Mabbun, Pablo N. The Role of Farmers' Cooperatives in Raising Production and Income in the Rural Communities, Economics Research Journal, Vol. XI, No. 2, September 1964.
5. United Nations, Rural Progress Through Cooperatives, Department of Economic Affairs, New York, 1954.

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THE ROLE OF CO-OPERATIVES IN MARKETING AND SUPPLY

Bibiano B. Arzadon
ECAFE/FAO Agriculture Division
Bangkok, Thailand

Introduction

It is attempted in this lecture to confine the subject matter on a brief discourse of the important aspects of co-operatives in relation to agricultural marketing and supply rather than go deep in detail into the working operations or functions of the co-operative associations. Before dealing into the core of the subject matter, it seems important to give first a brief review of the co-operative movement in this region, particularly in the Philippines, so that one could appreciate better the role of co-operative in marketing and supply.

Brief Review of the Co-operative Movement[1]

In Asia and the Far East, there has been a long chronology of indigenous type of co-operation—mostly informal in outlook. The history of the formal types of co-operative society could even be traced from the beginning of the century. It is an interesting history for in a number of countries in the region, there had been a rapid expansion followed by contraction. During the Second World War, in Burma, the then Indo-China, Japan, Malaysia and the Philippines, co-operative associations were disorganized or were used as tools of government or occupation policy. These conditions have led to suspicion of the motives for which co-operatives were established. It should be noted that in this region agricultural co-operatives were formed, by and large, with the aim in view of collective action among producers for some economic endeavours rather than by individual action. In some countries like Ceylon, India, and Thailand, the Second World War stimulated the growth of co-operatives. Experiences earned during those years have led to a more vigorous effort to re-establish co-operatives based on sound co-operative principles in places where the movement had suffered most during the war; and in most countries such experiences have spurred them to greater heights - in number and in range of co-operative activities.

In Burma, for instance, they now have 10,000 co-operatives and some 4,000 more to be organized to handle commodity distribution or for collective marketing of farm produce and manufactured articles. In Ceylon, "Co-operation" has become a "household by-word" since co-operative movement has permeated more or less 67 per cent of the country's households. In China (Taiwan) there are at present 322 townships or unit farmers' associations; 22 prefectural federation of these unit associations ("Hsien Farmers' Associations"), and one provincial federation of these 22 Hsien farmers' association. In India as of June 1963, there were 212,129 primary co-operatives, village banks, etc. including 6,539 state-partnered societies. In Indonesia, there are 29,301 co-operative societies. In Thailand, there are at least 9,950 primary co-operatives, village banks, etc. and besides these there are 544 primary agricultural co-operatives (farmers marketing and land co-operatives)—some of which carry credit. These figures throw some light on the extent co-operatives have grown.

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[1] Sources of information:
UN, Report of Technical Meeting on Co-operatives in Asia and the Far East, Survey of Rural Co-operatives in South East Asia, (Lucknow, 24 October to 3 November 1949).
FAO, Report on the Centre on Institutions for Agricultural Financing and Credit in Asia and the Far East, Rome: 1964.
Don V. Hart "A Philippine Co-operative Renaissance," The Co-operative Farmer, Vol. III, (Nos. 3, 7, 9), ACCFA, Manila, 1955.

In the Philippines, particularly between 1907 and 1947, there had been major attempts (11 in all) to establish co-operatives and other sources of agricultural credit for small Filipino farmers. During this span of 40 years, laws were passed, programmes were formed and agencies organized to stimulate the growth of the co-operatives and marketing associations. This started in 1907 when the Philippine Commission tried to attract private capital to form a bank for agricultural operations. It was unsuccessful. In 1915, Public Act 2508 tried to organize co-operatives under the Rural Credit Law. By 1926, there were about 544 rural credit associations but they became a "flop" since under the Act, loans were for one year renewable at 10 per cent per annum. It should thus be noted that efforts in co-operation were then geared primarily towards the scope of farm credit. However, in December 1927, Act No. 3425 otherwise known as the "Co-operative Marketing Law" was passed which authorized the Director of Commerce to promote, organize and supervise marketing associations. By 1939, about 160 marketing associations were registered with around 5,000 members.

In 1931, under Public Act 3895, the Philippine National Bank was authorized to regulate the creation and operation of rural banks. Seven credit associations and 2 rural banks were organized but were cut short in existence by the Second World War. Off and on there had been programmes like that of 1938 October when the Consumers' Co-operative League was organized which went into operation until in 1941 when the National Co-operative Administration was created to act as the Central Agency of the Government to supervise the operation and establishment of co-operatives. During the Second World War, co-operatives collapsed.

After the war, the National Co-operative Administration was re-established under Commonwealth Act No. 713 of 1945 as the axis which the promotion and coordination of all government activities pertaining to co-operatives, including farmers', manufacturers', retailers' and consumers' took place. However, in view of lack of official support and inefficient organizations, its operations became a failure. In October 1947 under Executive Order No. 93, it was converted into the National Co-operatives and Small Business Corporation; and in 1950, it became the Co-operative Administration Office under Commonwealth Act 565. By then, more than 1,300 co-operatives were existing, but they were organized like mushrooms overnight and they were not operating under co-operative principles.

It was on 14 August 1952 when the area of co-operative action started to become significant. It was the day when the Agricultural Credit and Co-operative Financing Administration was born under Republic Act

821. The primordial aims of the ACCFA were:[1]

1. To promote the effective organization of small farmers into co-operatives;

2. To assist them in obtaining needed credit at reasonable rates;

3. To establish an orderly and systematic marketing machinery for and controlled by the small farmers; and

4. To place agriculture on the basis of economic equality with other industries.

During the lifetime of the ACCFA, not all co-operatives were failures. There were many, too, which were successful. In 1963, under the "Agricultural Land Reform Code," the administrative machinery of the Agricultural Credit and Co-operative Financing Administration (ACCFA) created under R.A. No. 821 as amended by R. A. No. 1285 has been reorganized to enable it to align its activities with the requirements and objectives of the Code and redesignated it as the Agricultural Credit Administration (ACA). It is hoped that the agricultural co-operatives in this country under R.A. No. 3844 (Chapter V, Sections 101-118) will develop into a strong and viable organization and not to be destroyed by the weaknesses that made past attempts ineffective.

Understanding the Meaning of "Co-operative"

There had been many factors which caused the fall of co-operatives in Asia and the Far East. The causes might have been the lack of an adequately financed government policy which was not spelled out definitely; or the creeping in of politics which interferes with policy formation, lending and collecting procedures and also recruiting personnel; lack of security given by farmers against loans offered under a sound government policy; lack of necessary equipment and facilities, etc.; but by and large, the root cause was the low degree of literacy among farmers and the lack of knowledge and interest, skepticism and suspicion of the co-operative movement by the average small farmer, and the insincerity of those supposed to look after the welfare of co-operatives taking advantage of their less fortunate brother, the small farmer. For this reason, it is worthwhile to spread the real meaning of co-operation.

The term "co-operative" is widely misunderstood. It is often thought of as one of the tentacles of any existing Co-operative Department—that it is an extending arm of a government office. From the very beginning, it should be understood that in order to appreciate the role of co-operatives in marketing and supply or the role of co-operatives towards economic development, one should always bear in mind that a co-operative is an association of the people, managed and controlled by the people, and a collective endeavour of the people to obtain their (the peoples') economic development. It should also be noted that co-operation is not merely some routine functioning of a passive organization, but a flexible organization, progressive and adaptable to changing times and economic conditions. However, the heart of the matter is still the building up of individual to work collectively and not to rely too much on the Government. After all co-operative organizations belong to the people themselves who are members.

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[1] Don V. Hart, op. cit.

Major Objectives of Agricultural Producers Co-operatives

The appreciation of the role of co-operatives in marketing and supply could be best gained through a consideration of the major objectives of such institutions and the opportunities that exist to attain such objectives. It is therefore thought of as necessary to outline in general the major objectives of agricultural co-operatives which are grouped hereunder.[1]

1. **Orderly marketing.** It is a common knowledge in Asia and the Far East that a farmer when acting individually—all for himself alone—it is most likely that he sells his crop at the time of harvest when prices are very low. He is forced to do so because he needs cash for his daily requirements; or he lacks storage facilities and credit at reasonable terms to tide them over until their produce are sold advantageously. In this manner, products could reach the market in an orderly manner while the farmer has something to meet his daily requirements.

2. **Better merchandising.** Co-operative endeavour leads to better merchandising practices. Usually, grading is undertaken by progressive co-operatives before products are placed in the market. In some countries, co-operatives ascertain the needs of each market and make adjustments whereby surplus supplies are prevented on certain markets to prevent dwindling of prices or surplus products are transported to places of scarcity. Also, some co-operatives are producing the particular type of product which conform to consumer demand or preference.

3. **Bargaining power.** Logically, collective action strengthens bargaining power. Acting individually, the small farmers has less bargaining power than a co-operative wherein the manager could have stronger control by the substantial volume of a given commodity he handles; in which case co-operatives could get a better price for the produce of their members.

4. **Lower marketing costs.** Through large scale distribution, marketing costs are lowered. Under co-operative undertaking, distribution is done by securing volume; hence reducing the cost of marketing. It is also known that between the ends of production and consumption, intermediaries bridge the gap between the two ends. Although co-operatives may not be able to eliminate commission agents' functions, farmers association may be successful in substituting co-operative for individual private action which could narrow the spread between prices paid to the producer and those received at the trading end.

5. **Price fixing and implementation of price policies.** Co-operative associations could work with government agencies in the implementation of price policies in order to bring about the desired objectives. For instance, in some countries, especially in the highly developed countries,

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[1] H. H. Maynard and T. N. Beckman, Principles of Marketing (Ronald Press) N. Y. 1952.

some farmers' associations have attempted to prevent a tremendous drop in prices by adjusting their production pattern (e.g., curtailing the area planted).

6. **Improved production.** Through co-operatives, joint action in the purchase and use of farm implements, fertilizers, insecticides, etc., which are greatly needed in the expansion of agricultural output, would be greatly facilitated. For example, in some countries, e.g., China (Taiwan), the co-operatives are the agencies of the government in the distribution of fertilizers. Also, the Agricultural Extension Service of the Government could have a more far-reaching effect if through co-operatives the dissemination of latest agricultural practices and market information are channelled. In China (Taiwan) extension service is carried out by the farmers' associations.

The "C S M" Chain

After having gone through briefly what actually is co-operation and its functions (producers co-operatives) the question now is how these functions are interlaced to make co-operative organization the vital axis around which agricultural marketing and supply would revolve. This "tie-up" could be visualized in a better perspective if viewed under the needs of the farmers which could be broken down into credit, supply and marketing.

1. **Credit.** Credit herein is otherwise known as production credit. It is a common knowledge that there is an imperative need for the subsistence farmer for input of production credit. If credit is to be useful, it must be extended at the right time. Timely credit is a must, otherwise it would be meaningless. Credit should also be tied-up with a planned programme of increased agricultural production. This must be so because if loans are granted for use linked up with traditional agricultural practices, then credit would have no economic impact at all. In this connection, production credit must be supervised and a follow-up must be made to see how it is utilized to ensure that the farmer gets the optimum benefit from the input of such credit. This means then that technical "know-how" of the farmer and credit should run parallel. In short, the co-operative association extending credit must have at its own disposal, the machinery to extend the "know-how" for the use of credit.

2. **Agricultural supplies.** The second link-up between the agricultural producer and his co-operative is agricultural supplies or production requisites. This aspect shows the current practice of co-operatives in providing their members farm requisites such as seeds, fertilizers, insecticides, farm implements and machinery services such as the use of tractors for plowing, pumps etc. Agricultural supplies are extended to complement credit provided to members. This will ensure that the credit extended would be utilized according to the very purpose for which it was provided. Through co-operatives, supplies and services could be secured at the cheapest possible price. It is to be noted that in a multi-purpose co-operative, supplies also include consumers' goods. These are also important to the farmer as he needs something to lean to especially during his lean months. Japan is a good example in this case.

3. **Marketing.** The final link between the producer and his co-operative is marketing. It is concerned with making the products available, in time and space, to consumers. To the producer, what counts most is perhaps the return of his labor - hence, the best price for his produce. It should also be noted that marketing is an important link in the chain of various activities between the producer-member and his co-operative organization. In some countries of the region the failures of the co-operatives have been traced to the lack of marketing activities.

A number of countries tried to integrate the three aspects in various ways. To help us see more clearly how credit, supply and marketing are linked-up together, it is attempted herein to deal briefly with the experiences in this field. [1]

Experiences of Some Countries in Linking up Credit, Marketing and Supply

1. **China (Taiwan)**· In this country, farmers' associations which are multi-purpose, limited liability co-operatives perform their function at the township level. Average membership is about 2,500. These associations perform various functions including the provision of credit, marketing and supply (embracing also processing and warehousing), and doing services which the Government and agricultural extension service entrust them to do. In this connection, the associations take care in the distribution of fertilizer loans (about 600,000 tons per annum) and the collection of paddy (generally after harvest) for the Government. In addition, the other services done by them for the Government are the collection of rural land and surtaxes in the form of paddy and collection of compulsory sale of paddy to the Government (160 kilograms per hectare). They also process and store the paddy collected by them on behalf of the Government until needed for delivery, and sell about 100,000 tons of bean-cake for livestock feed. Aside from these, they also sell consumers' goods to members. To illustrate the extent they perform this additional function, in 1962 one association had an average sale proceeds of about $33,100. It is to be noted, on the other hand, that the greater portion of the net incomes comes from the services rendered on behalf of the Government.

There are also several points to take note regarding the "C S M" link-up in China (Taiwan).

In the first place, only persons or corporate bodies duly authorized by the Food Bureau of the Government can collect, store and process paddy and sell rice. In this connection, when the storage and processing facilities of the farmers' association are deemed insufficient, then one or more private traders would be licensed to bridge the gap. It is also seen that responsibilities are apportioned in such a manner as to make sure that practically no competition between farmers' associations and licensed traders exist in connection with rice collection for the Government. The farmers' associations have the virtual monopoly of handling rice trade which is strengthened by the fact that they are the only source through which chemical fertilizer is available for production in the form of crop loan and bean-cake for livestock feeding. These are the very commodities which are highly treasured by the farmers. Regarding tobacco, it has to be sold to the Provincial Tobacco and Wine Monopoly Bureau; as to jute, it has to be directed to the Provincial Supply Bureau; and sugar cane to the mills of the Taiwan Sugar Corporation.

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[1] Dr. Mohinder Singh, Role of Co-operatives in Marketing and Supply, Experience of Asian Countries, (National Training Centre on Agricultural Marketing) Ceylon: 28 May-13 June 1964.

FAO, Report on the Centre on Institutions for Agricultural Financing and Credit in Asia and the Far East, (Bangkok, 2-13 September 1963), Rome: 1964.

In view of the above situation, the recovery of production loan is no problem at all.

However, there is a problem involved in the link-up. In the first place, credit, marketing and extension activities are performed by different divisions of the same association. In order to support these activities, funds of the credit section have to be used. It should be noted, too, that an association sometimes uses about two thirds of its deposits to defray expenses involved in its merchandising activities without paying adequate interest to the credit section. In addition, whatever profits the credit section would earn are combined with other sections and about 70 per cent of these profits are used for extension and other activities. The problem then is that loan funds which are available for supporting directly for agricultural production activities are reduced while the credit section are hampered to build-up enough funds of their own. For this reason, the cost of credit (interest rates paid on deposits) tends to be high. To solve this particular problems, steps are now being taken to regulate the transfers to the supply section and other sections and to find ways to help the credit section build up funds of their own.

2. Japan. In Japan, limited liability multi-purpose co-operatives at the primary level cover nearly all the farmers and they engage in a wide number of activities such as marketing, supply, processing, etc. There are separate divisions within a unit co-operative to look after these different activities. How are these activities linked up? At the primary level, credit is provided by these general-purpose limited liability co-operatives. On the marketing side, an important activity at the primary level is the buying of rice on behalf of the Food Agency at the guaranteed price. Wheat and barley can also be sold through such co-operatives at guaranteed prices. In connection with this marketing activity, there are three points that deserve special attention. Firstly, the volume of rice to be offered for sale to the Government depends solely on the decision of the cultivator. However, if the quantity offered is thought of as too low, the government agents can raise the amount. Secondly, it may be mentioned that only the co-operatives can engage in warehousing activities in respect of agricultural commodities. Thirdly, guaranteed prices set up are higher than the international level but are not materially different from those sold to domestic consumers through other channels.

It should also be noted that on the side of marketing activity of unit co-operatives, 65 per cent was accounted for by rice. Taking the marketing activities on grains (rice, wheat, barley, etc.), such grains in the aggregate account more than 75 per cent of the total marketing business.

Regarding the supply activities of the co-operatives, the commodities handled are fertilizers, other agricultural requisites, and consumer goods such as rice, cloth, etc. Fertilizer, however, is the most important commodity handled. In the purchase of fertilizer by the farmer member, he has to pay the purchase price when he places the order or he has to secure it as a loan. On the side of supplying consumer goods, the unit association has to obtain such commodities by using its own funds or by borrowing and then sells them to the farmer member on credit. To illustrate the extent of activities on the supply side, materials for production, fertilizer, feed, insecticides, etc. account for almost 74 per cent of the total annual business of the unit co-operatives; and materials for consumption (rice, clothing, etc.) handled account for about 26 per cent of the total annual business.

In connection with the co-operative business activities, their main sources of income are the credit business and marketing business which involve largely in the purchase of rice and other grains on behalf of the Government. On the other hand, to undertake their supply activities which involve in the purchase and retail sale of consumer goods and requisites for agriculture, the unit co-operatives use the funds of their credit sections. For this reason, the supplies of credit to be used directly for agriculture might be reduced. However, under a large scale undertaking whereby there is an increase in the over-all activities of the unit co-operatives, perhaps there might be some savings in management expenses While this is the merit in this particular case, it might also mean that all the departments might not be efficiently managed equally.

3. **Republic of Korea.** In this country, multi-purpose co-operatives distribute most of the fertilizer as agents of the Government on credit. Repayment is either in the form of cash at an interest rate of 10 per cent per annum or through sale of rice. Co-operatives also sell other agricultural requisites (e. g., insecticides, etc.). The volume handled in 1962 were over a million ton of fertilizers; about $2.6 million worth of insecticides and also a large volume of farm implements, seedlings and seeds. They purchase sweet potatoes, vegetables, rice, etc. for sale through the National Federation of Agricultural Co-operatives. Through the federation, sizable quantities of sweet potatoes (63,000 tons) were sold to alcohol manufacturers; and 3.7 million eggs, 90,000 pounds of vegetables, and 77,000 pounds of rice to the United Nations Forces in Korea.

4. **The Philippines.** The experience in the Philippines as you all know has not been a very happy one. You have just noted earlier the renaissance of co-operative movement in the country. Since it is still too early to appraise the impact of the ACA, it is attempted herein to review briefly the experience of the Philippines during the time of the ACCFA.

The FACOMAS which are limited liability co-operatives have been established at the municipal level. These associations engaged in marketing (mostly rice), provision of credit, extension and agricultural requisites. In connection with the loaning activities of these associations, their loan funds were obtained mainly from the ACCFA and individual loan applications were approved by the ACCFA. Production loans were based on the repaying capacity of the farmers and they carried a pledge that they sell their produce through their cooperatives. In some cases, FACOMAS also operated stores for retail sale of consumers' goods. Previously, ACCFA used to grant facility loans for storage, processing, etc.

Owing to various factors, recoveries of loans had fallen far behind the schedule. On the marketing side, one of the reported shortcomings was the ill-timed and uncoordinated marketing operations of the FACOMA which resulted in heavy losses to farmers and also a loss of confidence of some farmers in the FACOMAS. Failure to fulfill marketing contracts were said to have been frequent and difficulties had been experienced in ensuring loyalty of members. It was also reported that supervision of loan funds had not been so effective. In recent years, loans advanced by ACCFA were restricted only to around 6,000 farmers (in 1960/61) whose repayment records had been good although they failed to fulfill their marketing contracts. One of the laudable works of the ACCFA was the distribution of fertilizer to farmers on behalf of the Government. It should also be noted that unlike the other multi-purpose co-operatives in other countries referred to, FACOMAS do not accept deposits and they were dependent for loan funds on the Government.

The unsatisfactory experience some farmers had in this country should not be regarded as an indication of the ineffectiveness of the co-operative movement. Rather, it should be construed as an evidence that even the best of methods could meet failure under certain conditions unless adequate measures had been included in planning. It should be ingrained in our minds that the system is not wrong but may be there were some loose ends in the implementation of some policies which needed tightening.

Concluding Observations

Although there have been some problems met by the multi-purpose co-operatives in Japan and China (Taiwan), it could not be denied that they have successfully linked credit, marketing and supply on a national scale. Based on their experiences, a good way of achieving expansion of credit especially production credit without sacrificing the need for security is the linking of credit with the marketing of crops. This is so because the proceeds from sales of crops produced by the farmer-member constitute largely the main source through which loans can be repaid. Furthermore, arrangements for marketing would enable the members to get a better return of their produce than they would have gotten from other channels. In addition, linking credit with supply would enable farmers to obtain farm requisites at lower prices; hence, ensuring the optimum use of credit for the very purpose for which it was extended.

Finally, we have just integrated the relationships between the three aspects. It is likened to a three-legged stool upon which the farmer sits and in the absence or breakage of one leg would topple the whole structure together with the farmer. Without supplies and services, the optimum benefit to be derived from the input of credit for agricultural production could not be derived. Also, the extension of credit, supplies and services would have no effect if co-operative marketing does not come into the picture. This is so because increased production brought about by credit, supplies and services without proper marketing arrangements would tend to decrease prices and perhaps leave the producer in his former position or make him worse than before.

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MERCHANDISING OF FARM PRODUCTS

Fabian A. Tiongson
Assistant Professor

Department of Agricultural Economics
College of Agriculture
University of the Philippines

Introduction

It has been said that "marketing is one of the means for agricultural revolution". This statement would seem appropriate considering the fact that the progress in our agricultural production has been retarded by an archaic marketing system with a strangle-hold on our Filipino farmers. One quick look at the different levels of marketing at present should be sufficient to convince us that there is a pregnant field not only to develop the existing marketing system but also to maximize our genuine contributions to help the people engaged in marketing agricultural products. The number of development programs which are in various stages of progress or decline is literally legion, ranging from the multipurpose to specific.[1]

It is beyond dispute that a dynamic marketing system has a tremendous impact on the production aspects of farming. Quite frequently, we think that once we have solved the production problems of agriculture, the solution to the marketing problems will follow suit. But this is not necessarily so. There cannot be a good market without a good product to sell and inversely, there can never be a good product unless the farmer is assured that the buyers will pay a price for the product which will more than cover the extra costs of growing it.[2] Thus, if we are to develop the agricultural economy of the Philippines, we must learn to recognize the importance of simultaneously considering the production and marketing aspects of farming.

As students of marketing, it is one of our primary tasks to be actively involved in opening and developing new methods and techniques of marketing so that present market may be expanded, more market potentialities created, operations made more efficient, the consuming public better served, and farmers given a chance to capitalize on their productive efforts.[3] There is no doubt that we believe that there are always better ways of doing things. Operationally, however, the peculiarities of the marketing problems may add to the complexity of any marketing strategy or "marketing mix" which may be chosen.

What is Merchandising?

Merchandising, defined by the American Marketing Association as "the planning involved in marketing the right merchandise or service at the right place, at the right time, in the right quantities, and at the right price", involves promotional activities — attractive packaging and display, advertising, product differentiation in an effort to establish customer loyalty for brand names, competitive pricing, and personal salesmanship.[4] It can also be stated that "merchandising is that **sub-function** of marketing dealing specifically with strategy to move merchandise — with the manipulation of merchandise and tactics to make the flow of merchandise (industrial and/or agricultural product) more rapid and more economically effective.[5] Evidently, a great deal of time, thought, effort, and money goes into this strategic action of moving merchandise; without it, some of the components of that "bundle of attributes", i.e., variety, freshness, appeal of agricultural products, service, and conveniences which the consumer found to be satisfactory and oftentimes, fascinating would be utterly lacking.

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[1] G. T. Castillo, "The Role and Functions of Rural Sociology in Asia", Offprint of Sociologia Ruralis, Vol. IV, No. 3/4 1964, Royal VanGorcum Ltd. — Dr. H. J. Prakke and H. M. G. Prakke Assen — The Netherlands, p. 360.

[2] G. R. Sitton, "The Relationship Between Marketing and Farm Management," Issued by The Agricultural Development Council, Inc., 630 Fifth Avenue, New York, 10020, p. 2.

[3] L. B. Darrah, "Marketing — Past, Present, Future: Terminal Report", Department of Agricultural Economics, College of Agriculture, University of the Philippines, 1958, p. 1.

Merchandising in the Philippines

Merchandising of agricultural products as a functional element of marketing has received but little attention in the Philippines during recent years. If ever, perhaps it is only in some supermarkets and in a more advanced market organization that this element has been given its due importance. The persistent ways of marketing food items at the various levels of marketing, so impressionistically, underscore the static or nearly so, nature of food distribution in the country. Yet, it is conceivable that a major opportunity for immediate expansion of business operations and higher incomes for farmers is through the use of improved marketing practices.

The questions then concern (1) what are the practices farmers might follow to improve their marketing and the prices received for their produce, (2) under what circumstances may farmers resort to the direct marketing of their produce to consumers and retail stores, and (3) what merchandising practices are most profitable in farmer marketing?

In an attempt to answer these questions, an exploratory study[6] was conducted by the Department of Agricultural Economics, College of Agriculture of the University of the Philippines with the financial assistance from the Community Development Research Council, University of the Philippines, to develop a packet of marketing practices for use by the barrio farmers. This includes the markets and market agencies to which to sell; the best marketing channels for distribution; the prices obtained for particular items; the quantitative and qualitative aspects of the agricultural products to be sold; and merchandising practices to follow — as size of displays, proper packaging of products, preparation of products for the market, standardization and grades, cleanliness and other physical and psychological factors which could contribute to the adaptation of products and services to the needs and desires of the consumers.

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[4] R. M. Walsh, "And What Are Its Parts?" **Marketing**, The Yearbook of Agriculture, United States Department of Agriculture, 1954, p. 8.

[5] B. Wilson, **Merchandising Primer: An Illustrated Digest of Principles to Remember in Planning Products and Marketing Programs**, McGraw-Hill Co., Inc., New York, 1953. p. 9.

[6] F. A. Tiongson, **Improved Merchandising of Selected Farm Products**, Community Development Research Council, University of the Philippines, 1964.

Basically, this study was undertaken to obtain ideas and suggestions from the leading farmers, wholesalers, retailers and consumers which might provide concrete bases for the improvement of agricultural marketing in the Philippines.

For our purpose, highlights of the merchandising study on palay/rice, vegetables, citrus, and eggs will be discussed. Specifically, these will include the type of market outlets, the reasons for choice of market outlets, and the suggestions given by the respondents to effect better marketing of farm products.

The Farmers

1. Type of outlets

In this study, wholesalers served as the main market outlets for the farmers' produce.[7] Although the types of wholesalers were not included, general observation showed that the rice millers and the warehouse operators or the local buyers who always procured heavy inventories of palay immediately after the harvest season, were of primary importance.[8]

As shown in Peredo's study,[9] one would be amazed at the complexity of the paths or marketing "arteries" used in moving palay/rice. One could easily recognize the unnecessary duplications of marketing functions performed by various types of middlemen and thus resulting in additional marketing costs. Although it is probably true that no single channel arrangement can serve all involved parties equally well, [10] nevertheless, a strong market organization among the farmers can help them market their produce more efficiently.

A substantial number of the vegetable producers had their business dealings with the major wholesalers. These buyers may include the major wholesalers either from the major market outlets or the nearby market area, the cooperative association agents, and the occasional buyers. About half of the farmers surveyed sold some of the produce to the retailers and a few sold direct to the consumers. Most of the citrus farms also used the major wholesalers as the main market outlets, although some sold to retailers.

In general, a substantial number of the operators sold their eggs to wholesalers. These buyers may include wholesaler-retailers, hatcheries, feed distributors, and occasional buyers. Operators frequently sold the eggs to the feed distributors in exchange for feed. If the value of the eggs exceeded that of the feed, the operators received cash for the difference. Inversely, if the value of the eggs was lower than that of the feed, the balance was either listed on a charge account or paid in cash by the operators. To some egg farmers, consumers were an important outlet. A few sold direct to the retailers.

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[7] Landlords per se, as marketing outlets, were not considered in the study. If a landlord is engaged in wholesaling, he is considered as a wholesaler; if, in retailing, he is considered a retailer.

[8] A detailed analysis of the types of outlets used by palay producers and palay/rice wholesalers and retailers is shown in B. D. Peredo, "Cost of Marketing Palay and Rice in Nueva Ecija, 1961-62," (Unpublished M. S. Thesis, University of the Philippines, College of Agriculture), 1964, pp. 66-75.

[9] Ibid.

[10] R. L. Kohls, **Marketing of Agricultural Products**, The McMillan Co., 1961, p. 26.

2. Reasons for choice of market outlets

Various socio-economic reasons affected decision-making of the palay producers in their selection of market outlets. The four most important reasons were higher prices, convenience, marketing agreement, and cash advance. The term "convenience" includes nearness to the market outlet, presence of buyer on the farm, services afforded by the buyer, such as storing and providing containers for the palay, "pick-up" service at the point of sale, and the performance of other marketing services.

When the farmer respondents were asked about the possibility of shifting market outlets, the study showed that the farmers have developed an economic attachment to palay wholesalers and that shifting to other outlets would be difficult. This sales pattern could have been the result of price considerations, personal convenience, some other benefits, and perhaps some economic pressure.[11]

Where there is a strong competition among vegetable buyers, price is only one of the factors that influences the selection of market outlets. In the main, convenience offered by the wholesalers was the most influential factor in the choice of market outlets. Of secondary importance were the favorable prices offered by certain wholesalers and the immediate payment for the produce. Some sold to the FACOMA due to a marketing agreement with the association.

For those who sold their produce to the retailers, the main motivating factor was the availability of these buyers. The operators of the leading vegetable farms commented that some retailers offered better prices than some of the regular customers. Convenience and the immediate payment for the produce were also considered in their selection of retail market outlets. Likewise, all too often, the overproduction of vegetables left the farms no particular choice in the selection of market outlets.

Those operators who sold direct to the ultimate consumers gave the reduction of the marketing spread as the main influential factor. In addition, convenience and the ownership of a market stall by the individual operators in the public market were cited.

When the vegetable producers were asked to consider other type of outlets, most of the operators of the leading vegetable farms preferred to maintain their present business relationships rather than modify their existing sales pattern and assume economic risks. For those operators who sold produce either to the retailers or direct to the ultimate consumers, the total volume of business was relatively small and oftentimes involved the culled or lower quality vegetables that could not be shipped to the major or secondary market outlets. Occasionally, non-economic motivations were involved in catering to such type of buyers rather than economic considerations.

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[11] An excellent discussion on the forces or power factors which facilitate monopsony gains is presented by C. R. Wharton, Jr., "Marketing, Merchandising and Moneylending: A note on Middlemen Monopsony in Malaya," Reprinted from the Malayan Economic Review, Vol. VII, No. 2, October 1962, pp. 24-44, (ADC Reprint).

The personal inconvenience encountered in selling to retailers was the main restraint in switching to such market outlets. Some operators wanted prompt disposal of the crop because of the perishability of the produce and the lack of marketing facilities, and the dangers that these retail buyers might not be able to handle it.

Similarly, the reluctance of the operators to sell direct to the ultimate consumers is due to the work involved in dealing with them. In addition, the constant haggling over the price of the produce causes tremendous inconveniences to the operators. Furthermore, the prices offered by these buyers were lower than those that could otherwise be obtained.

The operators of the leading citrus farms put equal importance to the price factor and convenience offered by the major dealers as the main motivating reason in their selection of outlets. A few of them cited the regularity of the customers, confidence in the buyers, and the immediate payment of the produce.

In general, the operators of the leading citrus fruit farms developed an economic attachment to the major wholesalers as their main major market outlets although some have considered selling to the retailers. The main restraint, however, in selling directly to the retailers was the fact that most of the retailers wanted credit sales due to lack of capital. The operators felt that collection, in credit sales would be a problem. A few chiefly emphasized the inconvenience of retail sales due to the relatively small volume of purchase. In selling direct to the ultimate consumers, the main restraints focused on inconvenience, the desire to sell in large quantities, and the desire for immediate payment.

For the leading poultry farm operators, convenience was most influential factor in their selection of market outlets. Of secondary importance, some farmers stressed feed credit, regularity of transactions and the price factor.

For those operators who sold to the retailers, convenience and the price factor were the motivating reasons. In addition, the constant patronage of the retailers and the existence of the barter system with the "sari-sari" store owners were cited. For those who sold directly to the consumers, higher prices, convenience, and their being neighbors or close friends were the reasons mentioned.

Although some operators considered selling to either retailers or consumers, the majority of them preferred to sell to major wholesalers rather than change their existing sales pattern. But even for those operators who sold some eggs either to the retailers or consumers, the total volume of business to such buyers was relatively small.

The retailers usually purchased eggs on a per hundred basis. The ultimate consumers purchased eggs on a per piece basis, but occasionally by the dozen. It was observed that low income consumers purchased eggs by the piece or by the peso worth, while the high consumers usually bought by the dozen.

Among the farmers interviewed, a sizeable number of them stressed "cash advance" as one of the criteria in their choice of market outlets. Tying credit and marketing together offers some unfortunate economic consequences. Farmers are committed to sell all or a portion of their produce to a specific buyer even before the harvest season. Thus, it limits the opportunity for the new marketing concerns to get started in the marketing field and to become effective in acquiring a significant proportion of the products.[12] Likewise, this situation puts an economic pressure in marketing which may restraint the free flow of farm products to the best channel of trade.

3. Suggestions made by farmers

Instead of the technique of having an "outsider" or so-called "specialist" advise the farmers on what they **ought** to do, a unique approach in which suggestions given by the more successful farmers were used as the source of advice or recommendations. It was felt that by adopting this particular procedure, other farmers would be more receptive to change due to suggestions generating from within — from the individuals of their own profession — rather than from the "outsiders".

In general, the five major suggestions of the leading farmers were:

a. For other farmers to obtain highest prices.
  (1) Palay
    (a) Store the product and wait for seasonally higher prices.
    (b) Sell quality grain — clean, good variety, properly graded to obtain premium prices.
    (c) Canvass all prospective buyers for best prices.
    (d) Sell to regular buyers to develop stable relationships.
    (e) Sell to FACOMAS or join cooperative organizations to gain bargaining power.
  (2) Fruits and vegetables
    (a) Join cooperative organizations or market cooperatively to increase bargaining power.
    (b) Canvass all prospective buyers for best prices.
    (c) Sell quality produce — clean, fresh, properly classified and graded, and properly handled — to stimulate sales and create demand.
    (d) Get good price information to keep abreast of existing market activities and develop an effective marketing program.
    (e) Adopt good farm management practices to increase yields and improve the quality of the products.
  (3) Eggs
    (a) Canvass all prospective buyers to take advantage of better price opportunities.

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[12] L. B. Darrah, Marketing Farm Products in the Philippines, p. 5.

(b) Join cooperative organizations or market cooperatively to increase bargaining power.

(c) Sell quality products to obtain the highest market prices.

(d) Adopt a good farm management technique to improve the quality of the products.

(e) Handle eggs properly — clean, cool, carefully packed — to minimize breakage and maintain quality.

b. For better marketing facilities.

(1) Improve roads and develop adequate and suitable transportation facilities to facilitate the efficient movement of products to market.

(2) Establish effective cooperative organizations with buying stations and good marketing facilities, especially for large farmers, to increase bargaining power.

(3) Active participation by government in distribution of agricultural products to improve the economic status of the farmers.

(4) Establish a liberal credit agency to provide the necessary capital to carry on the marketing operations.

(5) Establish adequate and suitable storage facilities to protect products during the holding period.

c. For improved merchandising practices.

(1) Palay

(a) Store the products and wait for seasonally higher prices.

(b) Join cooperative organizations or market cooperatively to increase bargaining power.

(c) Sell good quality products to obtain premium prices.

(d) Sell at wholesale to major buyers to minimize marketing costs.

(e) Sell milled rice at retail to obtain higher prices for processed rice and by-pass middlemen.

(2) Fruits and vegetables

(a) Join cooperative organizations or market cooperatively to improve bargaining power.

(b) Join cooperative organizations or market cooperatively to improve competitive position.

(c) If possible, and with the existence of adequate marketing facilities, sell direct to retailers and to consumers to obtain a larger portion of the consumer peso.

(d) Sell good quality eggs — fresh, clean, and properly classified — to satisfy consumer demand.

(e) Adopt good farm management practices to produce better quality eggs.

All told, the ideas and suggestions given by the leading farmers might help improve the economic situations of other farmers through better marketing of their produce. Clearly, some farmers realized the restrictions of their present marketing practices and desired a change. More often than not, their present economic situations provide as barriers to the adoption of the good ideas and suggestions. Also, their lack of marketing know-how and the lack of marketing facilities inhibit them from altering their existing marketing modes. As an illustration, it is doubtful whether some farmers could fully apply the suggestions of "store the palay and wait for seasonally higher prices". It would hardly be possible for them to canvass prospective buyers without having facilities for the storage of their grain. In this study, it was found out that many farmers did not store palay primarily due to the absence of adequate storage facilities or an account of some economic pressures. For those who stored palay, they stored the grain "at the house", or in "bamboo baskets". From the marketing point of view, these so-called storage facilities could hardly be called adequate and/or appropriate. Some farmers stored their produce in warehouses. But the physical facilities of some of these warehouses for storage purposes as shown by general observation, would be questionable. Seemingly, some of the marketing functions of the FACOMAS may be geared in this direction whereby the cooperative marketing associations could help the farmers control the produce (palay, fruits, vegetables and eggs) and thus enable them to formulate a good flexible marketing program.

Based on the information gathered from the farmer-respondents, there is no doubt that these farmers are conscious of the existence of these marketing institutions (FACOMAS) and the important role that they can contribute to the development of agricultural marketing. Although previous studies reveal that cooperative marketing associations participated but little in the marketing activity for palay, inasmuch as the FACOMAS are farmer-owned marketing associations, a more effective marketing program must be developed to justify their economic existence and consequently eliminate the cold reception given them by the farmers. A conceivable approach would be for the FACOMAS to make a survey of the members as well as the non-members concerning their planned marketing program before the harvesting season and the factors that influence their economic thinking. With a thorough understanding of the farmers' marketing plans, the associations can make a diagnostic study of the economic situation, and perhaps prescribe the necessary solutions, or both. At this point, these marketing institutions can cultivate the interests of the farmers and "sell" their marketing services.

Numerous factors influence the formulation of an effective marketing schedule. But assuming that an effective marketing program has been devised, providing storage facilities and granting loans by the FACOMAS to farmers may aid them economically. FACOMAS then might prevent the entrance of palay in saturated markets to be sold at distress prices or moving it elsewhere, or by rerouting the product to the best market centers. Waiting for seasonally higher prices can be done most effectively at this particular stage. Also, attracting the large farmers to use the services of the associations can increase the volume of business handled by the FACOMAS and simultaneously help all parties concerned.

Needless to say, a thorough scrutiny of the present performance of the existing FACOMAS is in order. This calls for an analysis of their strong and weak points and perhaps a close study of their business policies to determine why they were not performing as farmers believed they should.

The Wholesalers

Suggestions offered to farmers. Numerous suggestions were offered by the wholesalers to farmers to obtain the highest prices. The most important suggestions offered by the wholesalers were: adopt good management practices, sell quality products, produce good varieties or breeds, classify products properly, canvass all prospective buyers, and proper time of harvesting. Other important suggestions were: adopt cooperative marketing, sell direct to wholesalers, store and wait for seasonally higher prices, and seek government assistance.

The degree of importance given to the suggestions varied among the different types of wholesalers interviewed. The palay wholesalers marked sharply the importance of the production of good varieties of palay. It would be erroneous for the palay producers to concern themselves solely with the selection of certified seed of high yielding capacity without due regard to the production of appropriate varieties demanded by the market. In connection with this, the wholesalers also emphasized the adoption of the latest methods of cultivation in contrast with the existing crude practices of palay production.

The fruit and vegetable wholesalers considered it important to use the latest scientific methods of farm management. The fruit dealers also stressed the proper application of fertilizers and irrigation. On the other hand, the vegetable wholesalers emphasized diversified production of vegetables which would enable the producers to offer a broad selection of items. Also, they proposed that the producers schedule their production within the year. They should plan for early and late maturing varieties to obtain highest prices and have a regular supply of vegetables for buyers or to plan to produce enough of each product to have a worthwhile volume of sale.

For the egg dealers, however, the sale of quality products ranked first, followed with the use of modern techniques in the poultry industry. Understandably, consumers prefer fresh, clean, and graded eggs for different domestic purposes and they are willing to pay a good price for superior quality eggs.

The Retailers

Suggestions to farmers. The most important suggestions given by the retailers to the farmers to make their products more acceptable were: sell good quality products, prepare the products well, handle the products properly, classify the produce, and adopt good farm management techniques. Other important suggestions were: reasonable prices, proper time of harvesting, proper harvesting, proper time of selling, and the adoption of honest or ethical marketing practices.

The core of the suggestions was the qualitative aspect of the products marketed. Although numerous factors are involved in measuring consumer acceptance, it might be worthwhile for the producers to concentrate their efforts in producing a quality of produce that will satisfy the consumers. Undoubtedly, the consumers will be willing to pay a little bit more for good products.

The rice retailers suggested that the producers should fully emphasize efficient milling of palay and the sale of clean, well-dried grain. Also, they said the producers should be concerned with the appropriate varieties of rice demanded by the consumers.

Both the fruit and vegetable retailers stressed the importance of quality and variety. In addition, because of the perishability of the items, special attention was given proper handling of the commodities which clearly involved the proper packaging of the produce, the use of durable containers, and the employment of efficient transportation facilities. Next in importance for the vegetable retailers, however, were the proper classification and selection of vegetables and the adoption of good farm management practices. For the fruit retailers, however, emphasis was given to the prices asked by the producers and proper harvesting.

The egg retailers stressed the importance of good quality products. But in addition to this primary suggestion, they also put equal stress on the preparation of the products and the proper classification of the eggs marketed.

The Consumers

1. Suggestions aimed at making products more acceptable to consumers.

For farmers. The most important suggestions offered by the consumers to the farmers focused on the qualitative aspects and the attractive features of the produce. In the case of rice, the consumers were primarily concerned with a superior variety and good structure of the grains. In addition, they were particularly interested in the cooking quality and palatability of the product. For highly perishable commodities, such as fruits and vegetables, the consumers emphasized the variety, freshness, and other appealing features of the produce. For eggs, however, size, freshness, and the physical structure were important factors.

Other major suggestions were: proper wrapping and packaging of the products, convenience, proper processing and attachment of price tags on items sold. Some of the consumers suggested the organization of an effective cooperative organization and the constant supply of products to serve the needs of the consumers.

In the main, consumers strongly advocated the adoption of good management techniques to get better production of agricultural produce. It was also suggested that a more realistic approach toward a pricing system be developed by the farmers. Apparently, some consumers found it more expensive to deal with farmers. Although the consumers were variety-conscious, particular emphasis was laid on the different types of products carried by the farmers or the diversification of crops to ensure more alternatives or better selection of food items by the consumers.

For retailers. In general, the consumers felt that food retailers were charging a high price for their products. The consumers suggested that perhaps the retailers could explore the possibility of lowering prices or reducing the gross margin to increase the turnover and thus enlarge the volume of business.

As the retailers were the main source of food of the consumers, the consumers were particularly interested in the quality of food items handled — in terms of superior varieties, freshness, palatability of the products, and other factors. In addition, the consumers mentioned the need for cleanliness of the products. This was apparently a result of the practice of some retailers who carry food items without any regard for its cleanliness or appearance.

Proper salesmanship or the human aspect of selling was also stressed by the consumer respondents. Some complained about the attitude of some retailers and the lack of proper human relations in dealing with the consumers. In addition, the consumers marked the importance of sanitation in the retail stores. Since food is primarily handled by these retailers, it is of utmost importance that proper sanitary measures be undertaken to protect public health. This situation presents one of the manifold problems in retailing food items.

Other important suggestions dealt with the proper wrapping and packaging of farm products, price tags on goods sold, convenience, and adequate marketing facilities. Some minor suggestions were: provision of ample space in the retail stores to serve the consumers more efficiently, cooperative marketing, and constant supply of foodstuffs.

2. Major criticisms of the source of supply

As mentioned earlier, the consumers stated that some retailers charged a relatively high price for their merchandise. In connection with the pricing of the commodities, the consumers also complained about the absence of price tags on the items sold. Undoubtedly, the lack of fixed prices oftentimes caused a tremendous amount of inconvenience and a waste of time on the part of the buyers in determining the actual value of the food items. Apparently, some consumers did not take pleasure in haggling over the price of goods.

Another major criticism dealt with the quality of the agricultural products handled by the food retailers. Some consumers felt that the quality of the produce offered for sale was inferior. Consumers condemned the dishonest practice of some of the rice retailers in mixing varieties of rice. Occasionally, they mixed the old stock with new, thereby creating an unpleasant odor. Thus, the resulting inferior mixture greatly affected the cooking and eating qualities of the cereal.

For vegetables, inferior quality is a serious problem. This situation makes it very difficult for the consumers to obtain good vegetables unless new stocks arrive daily. Even then, where the produce is exposed to the sun, the inherent quality is hardly maintained. The manner of packing also affects the saleable features of the vegetables.

In purchasing fruit, most of the consumers were confronted with the lack of alternative choices. Problems of selection existed in terms of freshness, variety, and quality of the fruit. In most cases, consumers could find only immature or artificially-ripened and at times even insect-infested, sun-spotted, or bruised fruits.

The egg consumers indicated, as problems, the unavailability of fresh eggs in most retail stores and the presence of dirty and cracked eggs. Obviously, the lack of proper egg containers poses much inconvenience to the consumers and on the part of the retailers, results in a high percentage of cracked eggs.

Many consumers criticized the kind of sanitation existing in the public markets. It is not unusual to find food items displayed on an ordinary newspaper, bed mat, or banana leaves laid on the ground. Similar crude materials are often used for wrapping the food items. This is especially true on fruits and vegetables, and even grains. It is sufficient to say that very limited precautionary measures are undertaken by the food suppliers to safeguard public health. Obviously, this situation calls for better planning of the physical layout and structure of the public markets and strict sanitary ordinances on the part of the government.

Some Merchandising Studies

A number of research studies have been conducted by different agricultural colleges and government institutions in the field of grain marketing in various parts of the Philippines. Most of these studies, however, describe the customary events or regular marketing practices followed by producers and marketers in selling the product. Limited study has been made of ways to improve the merchandising techniques.

Various marketing institutions cater to the needs of consumers for agricultural produce. Certain factors, however, economic or otherwise, largely influence the selection of market suppliers. However, it was observed that most consumers were more price-conscious than quality-conscious. In rice purchasing, for instance, little consideration is given to such factors as accuracy of measure, purity of variety, proportion of broken grains, and sanitation in retailing.

Based on the rice purchasing test conducted by Cruz,[13] it was found out that (1) consumers do not usually obtain a full ganta when they buy rice and (2) the presence of admixture and broken grains was evident in the rice studied (Appendix Table 1). Volume-wise, the standard ganta is equivalent to 3 liters. However, findings showed that significantly, only eight per cent or 2 out of 25 gantas purchased for the study reached the 3-liter mark, as determined by a careful measurement of each sample. For all samples, the average volume was nearly four per cent less than a ganta. This is conceivable realizing the fact that rice retailers have developed a technique of filling the ganta by slanting it to about 50 degrees instead of placing it upright when measuring rice. The resultant effect is that rice retailers put in less than the specified quantity. By this practice, for every 25 gantas bought, the retailers were selling 26 gantas.

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[13] Cruz, D. A. "Retailing Rice in Selected Areas," The Philippine Agriculturist, Vol. XLIV, No. 4, September, 1960, p. 199.

Consumers' preference would be decidedly for whole grain rice. The study showed, however, that 37 per cent of the grains for all samples analyzed were broken. Obviously, this could be caused by any, or all of the following: poor milling, milling moist palay, admixtures, or all three. The range in proportion of broken grains was from 17 per cent to 52 per cent in the non-NARIC stores. The NARIC rice had over 70 per cent broken grains. This is to be expected since NARIC had adopted the marketing practice of mixing whole and broken grains to lower the cost of a ganta of rice. It is also interesting to note that NARIC had the lowest percentage of purity, hence the lowest retail price of P0.95 per ganta, the government price for a ganta of rice during the time of the study.

To determine the desirability of pre-packing rice in plastic bags for sale to customers, a trial test was run by Cruz for nine consecutive days in two selected retail stores in Los Baños, Laguna. Several plastic bags were filled with rice by the enumerators and retailers and set up on the open bulk display.

As shown in Appendix Table 2, close to two-thirds of the total buyers expressed a preference for pre-packaged rice plastic containers. Their aggregate purchases represented 58 per cent of the total gantas of rice during the period of experiment. The study further showed that the number of buyers that chose plastic bags as containers increased by almost 30 per cent and 22 per cent from the first to the second period and from the first to the third period of the test, respectively. This obviously meant a decrease in the number of buyers who preferred paper bags. Rice sales using plastic bags was highest during the second period but somewhat dropped during the third period. On the other hand, sale in paper bags dropped sharply in the second period but increased in the third period.

A similar test, broader in scale and somewhat modified, was also conducted by Cruz in six other stores, three each in Calamba and Sta. Cruz, Laguna, for a seven-week period. In conducting this particular merchandising test, however, the cost of the test materials was disregarded; hence their use did not increase the prevailing retail prices of rice.

At the end of the seventh week, the study showed that all stores had sold a total of 765 gantas in plastic bag containers as against 735 in paper bags (Appendix Table 3). This sales represented 51 per cent and 49 per cent for plastic and paper bags, respectively. The study further revealed that, in general, consumer choice shifted from paper to plastic bags after the second week. During the first two weeks, sales in paper bags exceeded those in plastic bags. Thereafter, sales in plastic bags exceeded those in paper bags.

The third series of rice merchandising tests combined the use of plastic bags as containers and the first model of the experimental rice bin as a sales case. This sales case has a cover which keeps the rice free from dust and germs and has a glass window which facilitated the buyers selection of the class or variety of rice.

Significantly, the study showed that rice sales after the new bin was introduced by 24 gantas or better than 20 per cent over sales prior to the use of the bin (Appendix Table 4). Volume-wise sales in paper bags dropped by 12 gantas or 22 per cent after the sales bin was set up in the store. Conversely, the sales in plastic bags increased by 36 gantas or nearly two-thirds after the bin was placed in the store. Such a shift suggested that consumers accepted the use of plastic bags as containers and specially desired retailing of rice in sanitary bins.

Citrus. In roadside markets, in sari-sari or fruit stores in public markets, or in bus stations, citrus is ordinarily sold loose — with two or three fruits representing the typical size of sale. In most cases, buyers consume the fruit almost immediately with relatively little of it taken home for "pasalubong," or for family consumption. With so few fruit sold per sale it is difficult to move an entire crop without incurring severe price drops considering the perishability of citrus. Thus, to determine whether pre-packing of citrus in ventilated plastic bags that contain 6 to 7 fruits each would facilitate or increase sales, a marketing test was conducted in four retail stores.[14] Initial results of the test showed that the volume of sales in the stores that offered fruit in plastic bags increased tremendously (Appendix Table 5). During the first week of the test, stores with fruits in plastic bags sold twice as much as other stores. Of this increase, the study showed that two-thirds was due to plastic bags and the other one-third to an increase in regular sales. Sales in the control stores were affected adversely by increased sales in the test stores. According to Quintana, as a sign of acceptance of the innovation, citrus retailers not included in the experiment clamored to be permitted to sell fruit in plastic bags. Some were willing to pay a premium price to get the containers. Sales by days during the week are shown in Figure I. It will be noted that the biggest increase in sales occurred in Thursday and Sunday, the regular market days in the area studied. Obviously, this suggests that the increase in sales were destined for home rather than immediate consumption. Quintana also observed that the retailers handling pre-packaged fruit not only increased their volume of sales but also sold the fruit at a slightly higher price, which was more than sufficient to cover the extra cost of containers. Needless to say, the advantage of increasing the sales is coupled with a fixed profit for the seller and minimizes price haggling.

In terms of the volume of weekly sales, the study indicated that the total sales of the stores selling both regular fruits and fruits in plastic bags were more than thrice the total sales of the stores with regular fruits only (Appendix Table 6). It was noted that the volume of sales in the control stores decreased until the fifth week. In the test stores the sales of regular fruits and those of the plastic bags moved in opposite direction with those of the regular fruits increasing and those of fruits in plastic bags decreasing. The irregular supply of plastic bags in the stores caused the decline in sales. The increase in sales of regular fruits was mainly due to purchases of people who were unable to buy fruits in plastic bags.

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[14] Quintana, V. U., "Development of Some Improved Merchandising Practices for Selected Farm Products," (M. S. Thesis, Unpublished, U. P. College of Agriculture, 1959), pp. 61-69.

For packaging citrus, **kaings** are frequently used to serve as containers. Usually, this is jumble-packed in the **kaing**. Sometimes citrus containers intended for nearby markets are "decorated" with selected fruits. Dry banana leaves are used as fillers and a wooden top is used as a cover; then the **kaing** is tied with rattan.

Packing citrus in **kaings** or baskets offers a problem. Baskets usually do not have a sturdy support and get out of shape easily. The bottom may be pushed in and the sides sag inward or outward. This condition is aggravated when the **kaings** are packed full, its contents are exposed to various pressures resulting in the damage of some fruits. In addition, some kaings have a rough or sharp edges which may also damage the citrus fruits. If the kaings are too large and too closely packed, lack of ventilation results followed by early decay. The common practice of using dried leaves as fillers leads heating and, consequently, affects the quality of the produce marketed. Furthermore, kaings are much more difficult to stow than wooden crates, and since they are returnable containers and quite difficult to clean or thoroughly disinfect, they may be a cause of infection to the produce packed or repacked in them. The use of **kaings** for short-distance travel may be economically feasible, but for long-distance, the reverse is true.

In an attempt to improve the citrus container, an experiment was conducted to test the advantages of the use of wooden crates as against the use of **kaing** (Appendix Table 7). Clearly, the experiment showed that although it took more time to pack citrus in a wooden crate, nevertheless, the wooden crate contains more and weighs more. Thus, whether the citrus is sold by pieces or by kilos, the use of wooden crate still has its advantage.

Baskets are very important in the transport of vegetables. This can be surmised from the fact that the flexible materials from which the baskets are made are usually available in the local area. But since the containers are "one-way, one-use deals," the cost of containers are occasionally quite high due to the difficulty of securing them. The vegetables are usually packed in baskets arranged in a vertical position. This is especially true with the leafy vegetables. In loading the baskets for shipment to major market outlets, they are often placed in trucks with other baskets piled on top of them. However, these baskets have no sturdy support, thus they get out of shape easily, thereby giving little or no protection to the vegetables in transit. Undoubtedly, with the type of containers used and the manner in which these are handled and loaded, a high percentage of damaged produce exists. In addition, the sharp edges of the baskets cut and bruise most of the leaves and stalks adjacent to the sides of the containers.

Another important factor to consider in packing the vegetables is the size of the containers. Evidently, the size and form of the container is usually determined by the availability of the materials locally and by the nature of the products and the weight it will have to carry. General observations used by the producers for shipment were too large to be handled easily and efficiently. As a consequence, it was not unusual for haulers to drop the vegetables while loading and unloading due to the tremendous weight of the produce. Incidentally, in experiments[15] conducted by the College of Agriculture of the University of the Philippines, wooden crates were shown to be more economically advantageous than bamboo baskets as packing contraptions for the produce (Appendix Table 8).

An admirable start has been made in the field of merchandising research. It may be considered a "shotgun" approach, but a "shotgun" approach is not nearly as wasteful when the aim is well-calculated. New techniques have been used. Encouraging results are being obtained. Yet, the field has scarcely been touched. Much remains to be done in developing marketing practices to follow and new ways to market farm products. More than ever, emphasis needs to be placed on developmental and experimental research techniques to break through the existing lethargy in marketing. Undoubtedly, it would be quite difficult to disrupt the traditional marketing practices commonly practised by our farmers. But such disturbances are bound to happen if society wants to have a vigorous economy.

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[15] Ibid., p. 50.

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Appendix Table 1. Characteristics of 25 gantas of Wagwag rice in 25 retail stores, 1958

PRICE GROUP [a]	VOLUME [b]		WEIGHT [c]		PER CENT		
	Ml.	Per cent full measure	Gm.	Per cent full weight	Broken grains	Moisture content	Purity
Highest—average	2,914	97.1	2,367	97.4	33	13.2	96
Medium—average	2,908	96.9	2,390	98.3	32	13.1	96
Lowest—average	2,792	96.0	2,325	96.0	36	13.2	97
NARIC—average	2,845	94.8	2,331	95.9	73	13.0	57
All groups	2,894	96.5	2,341	96.8	37	13.2	94

[a] Highest price ranged from ₱1.45 - ₱1.50 per ganta; Medium, ₱1.35 - ₱1.40; and Lowest, ₱1.25 - ₱1.30. Two gantas from NARIC stores were each priced at ₱0.95.

[b] Full measure: 3,000 milliliters.

[c] Full weight: Assumed to be 2,430 grams.

Source: Cruz, D.A., "Retailing Rice in Selected Areas," The Philippine Agriculturist, Vol. XLIV, No. 4, September 1960, p. 199.

Appendix Table 2. Volume of rice sales and number of buyers by type of container chosen, 2 retail stores, Laguna, 1958

THREE-DAY PERIOD	PLASTIC BAG [a]		PAPER BAG	
	Number of gantas sold	Number of buyers	Number of gantas sold	Number of buyers
First 3 days	111.5	69	107.5	45
Second 3 days	118.5	89	63.5	28
Third 3 days	107.0	84	74.0	35
Total	337.0	242	245.0	108
Per cent of total	58	61	42	39

[a] Polyethylene, a synthetic which has recently become popular in packing fresh food products.
Source: Ibid., page 201.

Appendix Table 3. Average weekly rice sales by type of container chosen, 6 retail stores, Laguna, 1958

WEEK	RICE CONTAINER		TOTAL
	Plastic bag	Paper bag	
	(gantas)	(gantas)	
First	96.2	107.8	204.0
Second	92.8	113.5	206.3
Third	104.8	94.2	199.0
Fourth	114.3	94.8	209.1
Fifth	122.3	110.5	232.8
Sixth	113.2	108.0	221.2
Seventh	121.8	106.3	228.1
Total	765.4	735.1	1,500.5
Per cent of total	51.0	49.0	100.0

Source: Ibid., page 203.

Appendix Table 4. Consumer preference for rice containers, 1 retail store, Laguna, 1958

WEEK	NO SALES BIN [a]			WITH SALES BIN [a]		
	Plastic bags	Paper bags	Total	Plastic bags	Paper bags	Total
First	18.4	16.4	34.8	22.7	12.1	34.8
Second	14.1	14.1	28.2	23.0	11.0	34.0
Third	11.4	13.6	25.0	21.7	10.9	32.6
Fourth	11.9	12.4	24.3	24.9	10.0	34.9
Total	55.8	56.5	112.3	92.3	44.0	136.3

[a] Average sales in gantas.
Source: Ibid., page 207.

Appendix Table 5. The effect of the use of plastic bags in the sale of citrus, 4 retail stores, Albay, 1958

	"Kaings"
Sales in 2 stores selling loose fruit only — 1 week	17.25
Sales in 2 stores selling loose and bagged fruit — 1 week	34.45

Source: Darrah, L.B., Marketing Farm Products in the Philippines. University of the Philippines, College of Agriculture, College, Laguna, Philippines, 1958 p. 201.

Appendix Table 6. The effect of the use of plastic bags in the sales of citrus fruits by week, 6 stores, Albay, 1957

WEEK	STORE		
	Control	Test	
		Regular	Plastic
	Kaing	Kaing	
1	8.0	5.90	11.4
2	7.0	9.70	5.2
3	3.4	16.94	5.8
4	5.9	20.10	4.1
5	5.2	18.90	2.7
Average	5.9	14.30	5.9

Source: Quintana, V. U., "Development of Some Improved Merchandising Practices for Selected Farm Products." (M.S. Thesis, Unpublished, U.P. College of Agriculture, 1959), p. 67.

Appendix Table 7. Comparison of the kaing and bamboo baskets by type of packing, Naga City, 1957

Type of Packing	Class	Time (minutes)	Number of Citrus	Weight (kilo)
WOODEN CRATE				
Position	Small	18	410	32.0
Jumble	Small	7	325	27.0
Mixed	Small	9	350	28.0
Position	Medium	16	260	30.0
Position	Large Ladu	13	200	27.5
KAING				
Jumble		6	265	21.0
Mixed		8	275	21.5
Position		—	125-130	22.0
Position (bulldozer)		—	250	44.0

Source: Ibid., p. 68.

Appendix Table 8. Comparison of the use of bamboo baskets and UPCA experimental crates for lettuce.

CONTAINER	Regular bamboo baskets	Wooden UPCA expt. crates	Wooden UPCA expt. crates
1. Form of lettuce	No trimming at harvest	No trimming at harvest	Field trimmed
2. Weight of container	2.5 kilos	3.5 kilos	3.5 kilos
3. Net weight of lettuce in Trinidad Valley	33.0 kilos	21.0 kilos	20.0 kilos
4. Net weight of lettuce upon arrival Manila	32.0 kilos	21.0 kilos	20.0 kilos
5. Loss en route to Manila	1.0 kilo	none	none
6. Net weight of lettuce when trimmed for retail sale	25.0 kilos	16.1 kilos	19.5 kilos
7. Loss in retail trimming			
Quantity	7.0 kilos	4.9 kilos	0.5 kilo
Per cent	22.0	23.0	2.5
8. Net weight of lettuce when delivered to buyer	23.5 kilos	16.1 kilos	19.5 kilos
9. Loss in weight overnight			
Quantity	1.5 kilos	none	none
10. Total loss:			
Quantity			
Transit	1.0 kilo	—	—
Trimming	7.0 kilos	4.9 kilos	0.5 kilo
Overnight	1.5 kilos	—	—
Total	9.5 kilos	4.9 kilos	0.5 kilo
Per cent	29.0	23.0	2.5
Value at ₱.80	7.60	3.92	0.40
11. Transportation cost at 3 centavos on:			
Saleable product	.705	.483	.585
Waste	.285	.147	.015

Source: Quintana, Ibid., p. 50.

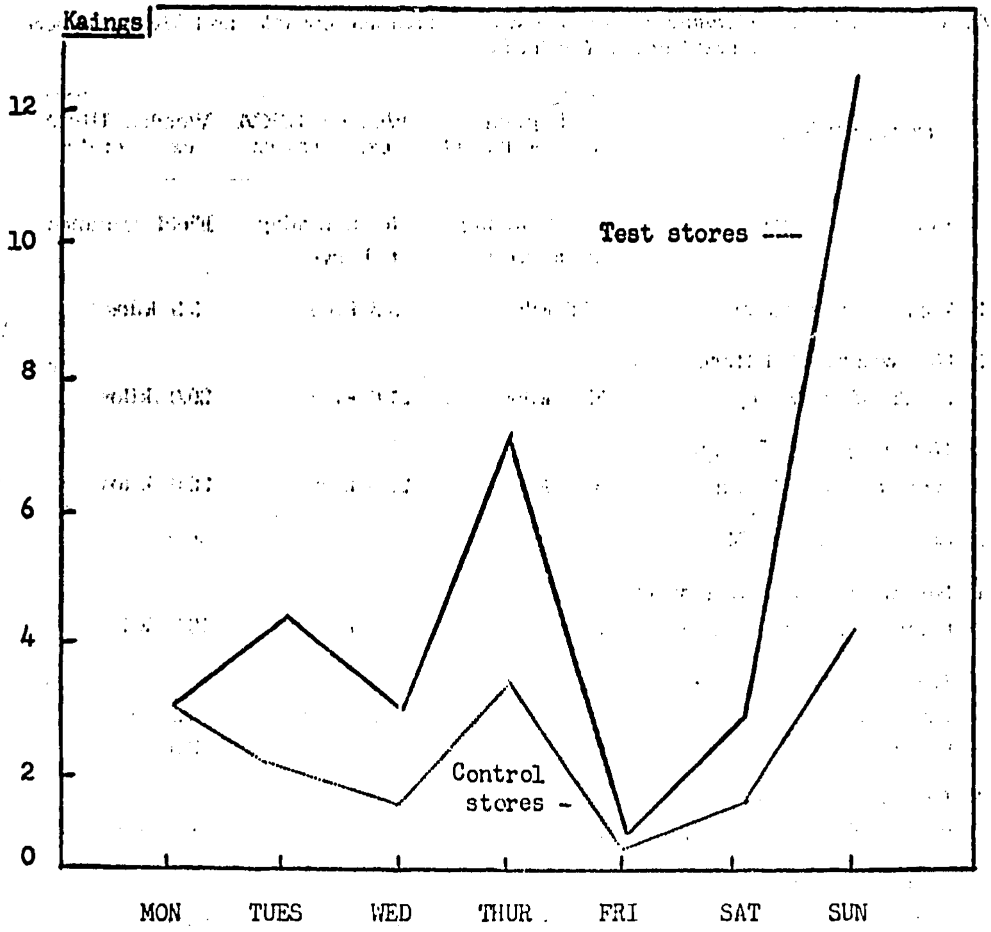

FIGURE 1. Comparison of citrus sales in test stores and control stores

(Test stores — regular fruit and fruit in plastic bags)

(Control stores — regular fruit only)

MARKETING LEGISLATIONS — REGULATION OF MARKETS

Bibiano B. Arzadon
ECAFE/FAO Agriculture Division
Bangkok, Thailand

The Need For and Some Criteria to Follow

Going back into ancient history, there seemed to have been some sort of laws to regulate the market. As early as 794, dubbed as a period of "hard times", Charlemagne (in a capitulary passed by the Church Council) prohibited profiteering in wheat and other foodstuffs by setting up maximum prices on these commodities.[1] This law apparently forbade "forestalling".[2] Even in a "laissez faire" policy where it is supposed that there should be a complete absence of governmental intervention relating to business of which marketing is a part, there has always been a degree of governmental activity. In the United States, as early as 1816, the Government started to draw away from the trend of "laissez faire" policy when protective tariff was instituted. As the process of marketing became more and more complex and as the years went by, government intervention became very significant especially at the primary and secondary commodity markets where the produce changes hands from the producer to the merchants and where there are a number of market practices which handicap farmers in getting a fair deal and thus affect their returns.

Similarly, in the developing countries just as well as in the highly developed countries, the policy has been directed towards giving more attention on what role the Government should play in order to improve the marketing system. In this connection, there has always been a highly controversial area for discussion and study. "What is the role of the Government in marketing?" is the question always put forward. In some quarters, they advance a thinking that the Government should be an active partner with private enterprise in controlling and directing economic activities. On the other hand, there are also some who scoff at this idea. Some of you here might have the same trend of thought as they; but, could problems in agricultural marketing be meted out by simply leaving them in the hands of farmers and letting them seek their own levels in the open? Even Adam Smith in his "Wealth of Nations" implied that in a "laissez faire" policy where there is absence of governmental interference in business, there is a need to protect society from injustice, oppression or injury.

The partnership the Government has with private enterprise takes the form in many ways. The Government, for instance, may pass laws in controlling and directing resources. Closely associated with these activities are the establishment of weights and measures, quality standards, enforcement of laws and lawful contracts, etc. The Government may also impose tariffs to protect new and necessary domestic industry against foreign competition or subsidizes to encourage the expansion of domestic agricultural industries. Measures may also be instituted to stabilize agricultural prices to give incentives to farmers. All of these activities are in no way motivated by a desire to curtail individual freedom but to remove or prevent evils that deter the achievement of the ideal, social and economic welfare of the people.

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[1] .... "Monumentum Germaniae Historiae", (Legum II, I, 74).

[2] A practice of purchasing goods into the streams of trade with the intent of cornering the supply in order to get higher prices.

If one would thus study the marketing set up in most countries in Asia and the Far East, he would say that there is a definite need for legislation. But improving the common well-being of the people is not a simple work either. Certain sectors of the economy might be pinched while another sector might be benefited. This is the question to be asked, therefore: "Are we going to preach the general interest of a particular sector of the economy, or scoff at the main organ of expression, the Government?" We must take into consideration, too, that problems of agricultural marketing can not be settled alone inside the farmers' sector but solution depends, too, on the whole economic society. On the other hand, it could be that in putting up a legislation, such measure might nullify the benefits derived from it. For instance, in order to make the farming community progressive, it may be necessary to tax people heavily from the other sectors of the economy to meet farm subsidies; - hence the presence of social waste of keeping uneconomic producers in operation. For this reason, before putting up any legislation or regulation, considerable study must be undertaken first. These questions may be asked: "On what particular sphere is it needed? What are the laws or regulations required? What is the quantum of regulation which is necessary?" It should also be noted that the implementation of the law might end up in misgivings because they are administered and carried out by various agencies and interpretation might be different from the original intent of the law. But the government should be dynamic/reviewing the law and changing or amending portions of it whenever necessary. A progressive country keeps on growing. For this reason, new developments create the need for new laws or regulations which might have been considered even improper at an earlier date.

What is being emphasized here is, since the trend in nearly all countries is to increase the area of public influence through governmental action, the real challenge is to appraise the best solutions among the many alternatives which are suited for different situations that exist in each country. It is very dangerous to be a "copy cat" on legislation which have been enacted in another country, no matter how advanced such country may be and no matter how similar circumstances or problems such country might have. They must be studied carefully and while laws and regulations of other countries may be a guide, they have to be scrutinized line by line in the light of local situation. With these general observations, let us now look into particular situations — the purpose of marketing legislation, reasons why it becomes necessary, as well as some examples of legislation.

Regulations to Maintain Competition and Prevent Monopoly

Although legislations of this nature are not yet thought of as necessary in many countries of Asia and the Far East region, it is worthwhile bringing to your attention one of the earliest laws promulgated to preserve competition and to curb the formation of monopolies which introduces into the economic system rigidity in price, stagnant production in periods of depression and consequent unemployment. This Act was known as the Sherman Act of 1890 which was enacted with the intention of remedying some defects in the marketing system which made the enforcement of competition difficult. It was found out that before the passage of the Act, there had been collusion among the large meat packers in the United States. For this reason, the Act was passed. It stated that "every contract, combination in the form of a trust or otherwise, or conspiracy in the restraint of trade or commerce among the several states or with foreign nations, is hereby declared to be illegal". It was disheartening, though, that the early court decisions under the Act almost nullified the very purpose of the law. The famous **Knight** case is an example where there was an attempt to break up the sugar trust. The Supreme Court declared that manufacturing was not commerce even though the outputs of the manufacturing concern went through the stream of interstate commerce. This particular -ruling of the high court alone encouraged further consolidations. In 1904, however, the Supreme Court reversed its ruling when it stipulated that a holding company formed for the purpose of controlling certain business enterprises was in violation of the law.[1]

As mass distribution (e.g., chain store system) began to grow, small competitors became alarmed of certain practices which had developed in which large purchasers of the mass-distributor type would be given lower prices than they ought to receive. In some cases, practices like giving free services which were out of proportion to actual expenditure or the use of "hidden manifestations" or devices made competition among distributors more inequitable. In view of the many evidences presented proving the existence of these malpractices of large concerns in taking advantage of their market power to secure unfair price advantage over the small competitors, the 74th Congress of the United States passed the **Robinson-Patman Act** of 1936 to curb such malpractices.[2] The most important provision of the Act was the prohibition of "discrimination in price between different purchasers of commodities of like grade and quality, where any of the purchases involved are in interstate commerce and where the effect may be substantially to lessen competition or to prevent competition with any person who either grants or knowingly receives the benefit of such discrimination, or with customers of either of them". This provision, also means that if different prices are given to different buyers, the price differentials must not be more than the difference in the cost of manufacture, sale or delivery owing to different methods in which such products are delivered or sold to such purchasers.

Since these legislations may not be needed yet in many countries of the region which have been proven as necessary in the United States, it seems that it is not practical to discuss them here in detail until the time is ripe to call for the formulation of similar policy.

Legislations or Regulations to Curb Particular Abuses in Marketing

Nearly all countries in Asia and the Far East have in some way enacted legislations or set up some forms of regulations to check some abuses which take place when the goods are going through the marketing channel. Some of these regulations are those which check faulty weighing, measurement, defective methods of sale, excessive market charges, lack of arrangements for the settlement of disputes arising from transactions between producer-seller-buyer.

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[1] Maynard and Beckman, Principles of Marketing, The Ronald Press Co., N.Y. 1952.

[2] E. Muttukumaru, Marketing Legislation, (National Training Centre on Agricultural Marketing, Manual), Kuala Lumpur, Malaysia, 3-22 August 1964.

In the Philippines you are all aware of the existence of some regulations governing weights and measures. Weights and measures have to be carried out in terms of approved scale. For instance the "ganta", the "chupa", the "meterstick" and the weighing scale have certain specifications and once they meet the required scale or dimension, they are officially tagged by authorized officers before they are used for commercial purposes.

The eradication of the other malpractices in marketing which have been mentioned earlier would depend on the efficient performance of the different marketing functions which include: the functions of exchange (buying and selling); the functions of physical supply (activities involved in the handling and movement of the commodity-storage and transportation); and the facilitating functions (activities making possible the smooth performance of the exchange and physical functions, e.g., standardization, financing, risk bearing, and market information). In this connection, it is worthwhile to review the standardization activities in the Philippines.

Regulations for Grades and Standards

The year 1916 marked the first move in the Philippines towards standardization under the Government after the promulgation of Executive Order No. 91. On 3 October 1938, a Committee on Standardization of Supplies was organized in the Division of Purchase and Supply under the Department of Finance. Since then, there have been agencies organized by the Government to undertake standardization of various commodities as part of their administrative functions. After the Second World War, through the promulgation of Executive Order No. 94, series of 1947, the Division of Standards in the Bureau of Commerce was created in November 1947 and started operating in February 1948. This Executive Order provides that the Director of Commerce, through the Division of Standards, shall initiate the fixing and upon approval of the President, the establishment of the grade, quality and other standards for all agricultural, forest, mineral, fish and industrial products of the Philippines[1] for which no standards have as yet been fixed by law, executive order, rules and regulations. The Division also was in charge of the inspection, classification, grading, standardization and licensing for export of copra and other agricultural products, as well as industrial, mineral, fish, and all other products for export subject of course to such rules and regulations as the Department Secretary of Commerce and Industry may provide with the approval of the President. The first commodity standardized by the Division was copra which was responsible in placing

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[1] Except sugar, abaca and other fibers and tobacco.

Philippine copra with high standards in the world market. The Division could also be credited with its initiative in establishing standards for a total of 29 commodities, out of which 22 have been approved by the President.

On 20 June 1964, Republic Act 4109 was approved converting the Division of Standards into a Bureau of Standards under the same Department. The Act provides that:[1]

> "The Bureau shall have charge of the establishment of standards for, and inspection of, all agricultural, forest, mineral, fish, industrial, and all other products of the Philippines for which no standards have as yet been fixed by law, executive order, rules and regulations; and the inspection and certification of the quality of commodities imported into the Philippines, to determine the country of origin of the articles which are the growth, raw materials, manufacture, process or produce, and to determine if they satisfy the buyer's or importer's requirements or specifications for domestic consumption; and to prohibit the discharge and/or release of any article which are the growth, raw materials, manufacture, process, or produce of countries without trade relations with the Philippine Government . . . " (Section 3)

One of the powers and duties of the Director of Standards is "to enjoin all customs collectors to enforce the prohibition on the exportation and/or importation and sale and/or disposition of any of the products within the preview of R.A. No. 4109, unless and until its standard shall have been certified by the Director of Standards or his duly authorized representatives as conforming to the standards set forth". Also the Director of Standards shall recommend the prosecution of any person or firm found violating any of the provisions of the Act.

In the Philippines, there are also other agencies authorized to set quality requirements of export products. For instance, the Bureau of Forestry is authorized to set quality requirements and inspect lumber and timber for export (Executive Order No. 221 - 8 June 1949). Also under R.A. No. 4166, the Sugar Quota Administration is authorized to set quality requirements of sugar. In addition, it checks the quality and inspects handmade cigars for exports. The Philippine Coconut Administration, under R.A. 1145, is authorized to set quality requirements and inspect copra for export. The Native Tobacco Classification Council under the Philippine Tobacco Administration is authorized under R.A. No. 2233 to set quality requirements and inspect native leaf tobacco for export. Similarly, by virtue of R.A. 2265, the Philippine Virginia Tobacco Administration is authorized to set quality requirements of Virginia leaf tobacco and by virtue of the provisions of R.A. No. 4155, passed in 1960, said office is authorized to inspect Virginia leaf tobacco for exports. Also, the Bureau of Fiber Inspection Service under R.A. No. 3099 is authorized to set quality requirements and inspect all kinds of fiber for export.

In India, the Agricultural Produce (Grading and Marketing) Act of 1937 is a good example of some of the laws which other countries faced with similar problems may wish to consider. This legislation is short and simple and contains a clause empowering the Central Government to make rules for the following purposes:[1]

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[1] ...., The DCI Story, (17th Anniversary Brochure), Department of Commerce and Industry, Manila: 1964.

a. To fix grade designations to indicate the quality of any scheduled article;

b. To define the quality indicated by every grade designation;

c. To specify grade designation marks to represent particular grade designations;

d. To authorize persons to make certain articles with a grade designation mark;

e. To specify conditions for marketing, packing, type of coverage and weight or quantity of the contents;

f. To provide for payment of expenses incurred for labels and any other grading equipment supplies; and

g. To provide for confiscation and disposal of produce marked otherwise than in accordance with the prescribed conditions with a grade designation mark.

Unauthorized marking with a grade designation mark is punishable with a fine up to Rs 500; and counterfeiting grade designation marks is punishable by a fine or imprisonment up to two years or both. The Act has a schedule showing what agricultural products are to be included; and the Government is empowered to include additional products to the schedule to which the Act will apply when deemed necessary.

Under the Act are rules to guide and control the persons engaged in grading. There are two types of rules, namely:

a. Grading and marking rules which provide the procedure for issuing certificates of authorization to suitable parties and the form and conditions of such certificates; and

b. Specific grading and marking rules for each commodity. The specific rules embody the following main headings; short title and application: grade designations; definitions of quality grade designation marks: method of marking; and method of packing.

What is important to take notice about the Act is that grading for internal consumption under the Act is of a voluntary nature. Interested parties who wish to abide by the rules and regulations of the Act just apply for a certificate of authorization to grade and pack a product included in the schedule of the Act. In view of the advantages derived in selling quality products for which price premiums are readily paid for, producers and processors are encouraged to take up grading voluntarily. In India, there is no compulsory grading but in order to maintain the quality standards set for certain export commodities which are facing world competition, Section 19 of the Sea Customs Act has been applied to prohibit their export unless they are graded in accordance with the Agricultural Produce Act of 1937. These examples show us how legislations could be made to achieve the desired goals in improving the marketing system.

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[1] E. Muttukumaru, Marketing Legislation, (National Training Center on Agricultural Marketing), Kuala Lumpur, Malaysia: 3-22 August 1964.

Regulations of Markets[1]

As noted earlier, from the exchange to the physical and to the facilitating functions, there are a number of practices which hamper the farmers in getting a just share of their produce. For this reason, a number of legislations for regulating the markets have been passed in many countries of Asia and the Far East. It is thus attempted in this part of the lecture to review some of the regulatory programmes in operation in this region.

In Japan, under the Agriculture and Forestry Economic Bureau, there is the **Enterprise and Marketing Section** which is responsible for the administration of the "Commodity Exchange Law". This section supervises the activities of the promoters and wholesalers of fruits and vegetables at wholesale markets and the operations of the grain and sugar exchanges. In this connection, it seems that facilities for storage and refrigeration of perishables are provided for.

In Hong Kong, there is the "Agricultural Products (Marketing) Ordinance" of 1952 which specifies that all locally produced and imported vegetables sold at wholesale must pass through the Kowloon vegetable market. This activity is supervised by the Commissioner of Cooperative Development and the Fisheries Department assisted by an advisory board of 6 non-official persons experienced in industry, including the chairman and the vice-chairman of the Federation of vegetable marketing cooperative societies. Working hours, methods of sale and payment, market charges, etc. are regulated to ensure that farmers would get a fair deal. The main functions of the market authority include the channelling of the vegetables (collection and transport) from the collecting depots and marketing cooperative societies in the New Territories to the whole sale market in Kowloon and also the supervision of sales and financial transactions there. This is a big undertaking for about 350 permanent staff coupled with about 100 on a daily or weekly basis were employed in 1962. The operation of the market authority was initially financed by government loans which have already been fully repaid. Sales in the market are all in cash basis and the organization gets 10 per cent of the sales price as service commission while in the case of co-operatives, 3 per cent is refunded to them to cover incidental expenses involved in the collection, weighing and documentation of vegetables at the collection centers and the employment of salesman at the wholesale market.

In China (Taiwan), the whole markets for fish, hogs and vegetables are regulated by committees in the major producing and consuming centers. The committees comprise representatives of the city and township governments and the producers association concerned. In Ceylon, too, the weekly market fairs which are actually retail and wholesale markets are supervised by the respective local authorities.

Under this topic, it is worthwhile to discuss the regulation of wholesale markets in India as it has gained valuable experience of over 30 years in undertaking a marketing improvement programme. The need for the regulation of wholesale markets in India originally was thought of when it was desired that available supplies of pure cotton to the textile mills in the United Kingdom should be at reasonable prices. For this reason, a special law known as "The Cotton and Grain Market Law" was enacted in Berar. In 1917, the Indian Cotton Committee was formed which recommended the regulation of cotton markets along the lines of the Berar markets.

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[1] F. A. Shah, Regulation of Markets, (National Training Centre on Agricultural Marketing), Kuala Lumpur, Malaysia: 3-22 August 1964.

After undertaking marketing investigations, the Indian Royal Commission submitted a report in 1928 which highlighted the defects in the agricultural commodity markets and forwarded recommendations to establish properly regulated markets in order to eradicate the defects in the system. In 1931, the Central Banking Enquiry Committee favorably endorsed the recommendations which as a result prompted some provinces to enact basic market legislations in the early thirties. In 1938, a model bill was prepared by the then Central Agricultural Marketing Department (now the Directorate of Marketing and Inspection) which became a pattern for several States in drafting their respective bills. It was after the Second World War when the impact of the Five-Year Plan in the 1950's was felt which spurred the pace of market regulation. So that by 1962-63, 14 states had already enacted legislation while in the remaining five states and territories draft bills were being considered. For purposes of illustration, it is worthwhile to discuss "The Punjab Agricultural Produce Markets Act" of 1939.

Under the legislation, the State Government is empowered to:

a. Declare the area of the regulated market and notify the commodities to be regulated (Section 3); (This means that the Government is empowered to exercise control over the purchase and sale of any agricultural produce in any area which it might specify).

b. Constitute a market committee representing the various interests, with growers-representatives in the majority; (Sections 7 and 8 of the Act provided for the establishment of a market committee for every specified area; and more than half of the members of which should comprise representatives of producers while representatives of business and government officials are also represented).

c. License market functionaries including commission agents, brokers and warehouses;

d. Fix market charges, trade allowances, methods of sale, maintenance of records of sales and weights; and

e. Levy market fees to meet the expenses of market committees, etc. (The Market Committees' duties were set out under Section 9; and Section 28 gave it the power to make by-laws for the regulation of its own business as well as conditions of business in the marketing area which included above items [(c), (d) and (e)].

In various State Acts, they define what are the agricultural produce to which the Acts would apply and they are listed in the Schedule attached to the Acts. The number of commodities notified for regulation varies between States from 3 to 54. However, food grains are regulated in most of the States. The extension of legislations to fruits and vegetables, livestock and livestock products and tobacco has been limited.

Benefits Derived from Regulated Markets

The advantages that could be derived from the regulation of wholesale markets could be summarized roughly into the following categories:

a. reduction in village sales;

b. improved system of sale;

c. correct weights and unit of quotation;

d. reduction of market charges; and

e. improved marketing services.

Reduction in village sales. In the assembling of farm produce, the growers, jobbers or traders, cooperative societies, and even the itinerant dealers, village merchants, etc, are involved. In order to determine the share of each agency in the total market arrivals of the notified commodities, the Directorate of Marketing and Inspection collected data from 167 markets in seven States in 1959-60. The findings disclosed that averagewise, 65 per cent of the aggregate market arrivals were accounted for by growers; 31 per cent by village merchants, traders, etc. and 4 per cent by the co-operative societies. On account of the popularity of the regulated markets, total market arrivals handled directly by growers have increased resulting in decreased sales in the villages. In 1954, for instance a report stated that at Hyderabad State, the proportion of the growers' arrivals into the markets ranged from 30-95 per cent as a result of regulatory measures as against 20 per cent only during the period without regulatory measures.

System of sale. The methods of sale improved considerably. One of the main objectives of the "Markets" Act is the introduction of open auction or open agreement system of sale which would enable the producer to get a competitive price for his produce.

Correct weights and unit of quotation. Through regulated markets, correct weighing has been introduced; thus the use of uncertified weights and measures has been completely done away with. In this connection, weighmen are licensed and the use of standard weights and measures has been mandatory.

Reduction of market charges. Through the introduction of regulated markets, there has been a reduction in market charges payable by the producer-seller. It was observed that in 1961/62,[1] there had been a reduction under each item payable by the producer-seller which varied from 33-66 per cent; hence there have been greater savings accruing to the farmers per unit of goods marketed.

Improved marketing services. In the regulated markets, arrangements have been made for the collection and dissemination of price situation relating to the market concerned and the terminal market. Such prices are posted on bulletin boards or announced by public address system for the benefit of illiterate farmers. Some regulated markets use radio sets to receive latest price quotations from the key markets in the country. Some market committees have also arranged to supply daily market information to village **Panchayats** or councils located in the area served by the market. These price information and market news helped farmers plan their marketing procedure.

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[1] On the basis of data collected from 500 market committees by the Directorate of Marketing and Inspection.

In the regulated markets, the recognized commercial grades have been introduced. These eliminated the need for the inspection of each and every lot; they helped accelerate the auction process; and they ensured a fair price to the producer-seller which commensurate to the quality of the produce. In this connection, the Directorate of Marketing and Inspection provided facilities for grading in the important regulated markets. This scheme also includes the provision of trained graders who determine the prescribed grades of each lot arriving into the market before sales would start. During 1963, it was reported that grading was introduced in 50 markets already.

Other services. Other services provided are facilities put-up such as drinking water for livestock and human beings, parking space, auction shed, resthouses for farmers, etc. It was reported that during the last 15 years, the State Government made an advance of Rs 20 million to 448 market committees as loans for the purchase of suitable land for market site and for the construction of buildings. To assist in this project, the Indian Standards Institute and the Directorate of Marketing and Inspection made standard plans for various categories of markets on the basis of volume handled.

Legislation for Warehousing

As noted earlier from my lecture on "Storage and Warehousing", you became aware of the many forms of benefits that one could get from storage or warehousing. On the other hand, there are also malpractices that go with warehousing unless rules and regulations are set up. For instance, there might be a possibility for large warehouse operators to do some centralized control of grain supplies and with a collective effort among themselves, they could keep merchandise out of the market as a means of increasing prices. Also warehousemen, without any regulation, could take advantage of their position by using faulty scales, etc. For this reason there is a need to curb these malpractices through Government regulation and control of warehousing within certain limits and in varying degrees.

In Japan, for example, they have fundamental laws governing public warehousing business. They have the Civil Code (Articles 657-666) which provides the basic principles of deposit contract; the Commercial Law (Articles 597-628) which provides the principles of commercial transactions; and the Warehousing Business Law of 1 June 1956 with the main objective of which was to adopt a licensing system for the issue of warehouse bonds, centering around the freedom of opening warehousing business and the licensing system for the issue of warehouse bonds. Aside from these, Japan has the Agricultural Warehouse Law enacted and became effective in 1957. Under the legislation, the warehouses are placed under government control since agricultural warehouses are to serve the public.

The extensive authorities of the government in supervising the agricultural warehouses are: [1]

a. Approval of warehouse business;

b. Approval of amendments in business regulations;

c. Inspection of business. The Government can ask reports on business and inspect books, management of business, and assets and liabilities;

d. Order and disposal necessary for supervision;

e. Suspension of business or cancellation of approval on business;

f. Order for public interests. The Government, if necessary for the purpose of public interests, can force the warehouses to accept the designated grains and others for custody;

g. Penal regulations. The Government can impose penalty on the warehouse holders when they violate the order or disposal by the government.

Other Legislations

There are other legislations such as the laws regarding food and drugs, meat inspection and health standards for milk and milk processing and for various slaughtering and food processing. These are legislations to protect the consumer. They also include conditions under which food is labelled, advertised and wrapped and sold to the consumer, so that the consumer is protected against deception, while at the same time the food is sold hygienically.

There are also legislations which are all embracing the field of agriculture. In Japan, for example, there is the **Agricultural Basic Law,** which came into effect in June 1961. It aims to bring about structural improvement of Japanese agriculture by increasing the size of farms improving productivity, raising the level of farm income in relation to non-farm income, maintaining price stability, improving marketing and developing those commodities for which domestic demand is rising. In the field of marketing, reforms were mainly geared to commodities for which there is a new and rising demand (e.g. livestock products, fruit and vegetables). An example is the granting of licenses for livestock dealers which is limited to applicants only having received especial training.

There are also legislations to stabilize prices. In the Philippines, there is the R. A. No. 3452 wherein the Rice and Corn Administration attempts to stabilize the price of paddy rice and corn, to provide incentives to farmers and give them opportunities to sell their produce at a price which will afford them a fair and just return for labor and capital investment.

In some countries, there are also legislations which empower the Government to interfere directly in the marketing process and take over the activities which have been normally in the hands of private trade. The trend towards this is prevalent in Burma.

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[1] Japan FAO Association, Marketing and Warehousing of Rice in Japan, Tokyo: 1963.

Caution

There are regulations which in the great enthusiasm to improve the marketing machinery, some quarters would advocate the elimination of some market intermediaries who are always accused of and held responsible for price manipulations or for all the defects or inefficiencies in the marketing system. There may be a grain of truth of such accusations to some extent; but it should also be noted that market intermediaries perform a very essential service which could not be replaced overnight. What should be borne in mind is that regulations of market should be made to operate to safeguard the interest of the weaker party — the producer-seller, rather than eliminate altogether the existing functionaries which without them might disrupt the whole marketing system. Since marketing involves all activities associated with the movement of the produce from the farm to the consumer, market legislations and regulations should thus be formulated with the object of supervising and controlling the working of various functionaries operating in the market to the greater advantage of the producer-seller rather than completely erasing them from the face of the world of marketing.

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PROJECTING DEMAND FOR AGRICULTURAL PRODUCTS

H. J. Mittendorf
Marketing Branch
FAO, Rome

In planning agricultural production, trade, marketing facilities and organization, price stabilization schemes, stocks, investment and credit programs or any other development programs accurate information on future trends of demand is required. If an accurate and realistic estimate can be made of the future level and pattern of consumption, the resources of a country can be allocated in accordance with its needs, and the possibility of wrong investments can be kept at a minimum. This is particularly important in developing countries which are endeavoring to accelerate economic development.

Before we start to discuss the techniques and problems involved in projecting demand it might be useful to define the terminus technicus "demand". By "demand" is understood the amount of commodities, in this case the quantity of agricultural commodities (cereals, meat, milk, fruit and vegetables, etc.) which buyers or consumers are able and willing to purchase at a given price, i.e., effective demand. The term "demand" as used in this concept does not imply the need or desire for certain commodities, which might be much more.

Need for Regular Review of Crop Utilization

In projecting demand for agricultural products a careful analysis of their present supply and utilization is required. If this information can be supplemented by an analysis of the supply and utilization of these products during preceding years, this would enable the planner to analyze recent trends of supply and consumption, which is of great assistance in any realistic forecasting.

As a useful tool for analyzing the utilization of agricultural products so-called food balance sheets have been developed (Table I). In these food balance sheet a **quantitative** analysis is undertaken to estimate the total supply of food available and its utilization in the country. If they are drawn up regularly and later tabulated for a period of years, trends of the overall national food supply and its utilization can be recognized.

Usually food balance sheets are drawn up for a period of twelve months. This period should coincide as closely as possible with the time when the most important crops are harvested, consumed and exported. For countries in the northern hemisphere the period usually referred from 1 July to 30 June. In tropical countries this period would need to be changed to coincide with the period of harvesting. In countries with two harvests in a twelve months period it might be useful to draw up food balance sheets for both harvest periods.

What are the elements needed for the preparation of a commodity balance sheet? Table I illustrates the standard form of a food balance sheet.

Table I. Food Balance Sheet

(Period ....)

Product	Supply							Utilization								
	Stocks		Changes in stocks	Production	Imports	Exports	Total supply	Nonfood use				Supply of food				
	at beg. of year	at end of year						Seed and waste	Feed	Industrial	Total	Total gross	Extraction rate	Net		
														Total	Per capita	
															per year	per day
							1000 m tons						Percent	1000 m tons	Kilograms	Calories
Wheat																
Corn																
Sorghum																
Rice, milled																
Other grain																
Total grain																
Sugar																
Potatoes																
Onions																
Pulses																
Other vegetables																
Fruit																
Beef and veal																
Buffalo meat																
Mutton and lamb																
Other meat[a]																
Total meat[b]																
Fish[c]																
Butter																
Vegetable oils																
Total fats:																
as product																
fat content																
Cheese																
Whole milk[d]																
Eggs																
TOTAL CONSUMPTION																

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[a] Includes poultry, camel, rabbit, game and edible offals.

[b] Carcass weight. Production includes meat from animals slaughtered within the country, whether home-bred or imported. Trade excludes meat from exported as well as imported animals.

[c] Landed weight.

[d] Cow's, buffalo's, sheep's, and goat's milk. Production excludes the amount fed to young stock. Trade and consumption include the whole milk equivalent of canned and dried milk; dried whole and skim milk not separately specified in trade statistics.

1. **Stocks.** An essential part of a commodity balance sheet is the estimation of stocks of food available at the beginning of the harvest year. A regular stock reporting service has to be organized on a monthly basis, covering the main commercial, government and farm stores. Since information on stocks is most important for any active market policy, efforts must be made to organize its collection on a regular basis. The issuance of licenses to traders can be subject to a regular reporting of stocks on hand. Traders must be assured that the information given by them will not be used for taxation purposes or any other measures which might be to their disadvantage. Moreover, the information provided by individuals should be treated as strictly confidential and only a summary of the total stocks should be used for analyzing the market situation.

2. **Production.** Under this heading estimates of home produced food supplies are recorded. It is often most difficult to obtain reliable data on production.

3. **Imports and exports.** Figures for imports and exports can be taken from official trade statistics.

4. **Available supplies.** This figure is obtained by adding to or subtracting from the stocks and production the net imports or net exports, respectively. The resulting figure represents the total food supply available for food and non-food uses.

5. **Seed.** The quantity of agricultural products used for seeding depends upon the area to be planted and the average seeding rate per hectare.

6. **Feed.** The amount of cereals and tuber crops fed to livestock is usually very difficult to estimate with accuracy because of lack of data. It can be expected that with rising incomes and increasing demand for livestock products, the feeding of crops to livestock will become more and more important, and arrangements should therefore be made for collecting reliable information on quantities used for feeding. This could be done by regular questioning of farmers and feed mixing plant managers about quantities fed to or sold for livestock.

7. **Waste.** The quantities to be recorded as waste represent the following losses:

   a. losses in harvesting and threshing where the production figure is based on the harvested area and the average yield.

   b. losses in weight occuring in damp climates where harvested crops may contain an excessive amount of moisture which is lost in drying, if the crops are estimated on a tonnage basis before drying has occured.

   c. losses caused by infestation or other spoilage in storage or distribution.

8. **Food (gross).** The figures recorded under this heading are simply the balance of the available food supply calculated by deducting from the total supply the figures for seed, waste, industrial use and feed. They represent the quantities directly available to consumers before the application of extraction rates. These figures include also quantities used for making alcoholic drinks (beer). With increasing development of food pro-

cessing industries this item could be further divided into the following subheadings:

- a. **for human consumption**
  - (1) meal, flour, flakes, semolina, baking ingredients, etc.
  - (2) starch, sugar, syrup, etc.
  - (3) malt (for food use only, not for beer)
  - (4) other
- b. beverages and industrial uses
  - (1) beer
  - (2) alcohol
  - (3) other beverages
  - (4) industrial uses (starch, flour).

9. **Extraction** rates are applied chiefly to cereals and are used to effect a conversion of grain to flour and of paddy or rough rice to milled rice.

10. **Food** (net). These figures represent the actual quantities of food directly available for human consumption, after the application of extraction rates. It should be emphasized that the reliability of the figures shown in these columns depends upon the accuracy of those shown in the preceding columns.

Breakdown into Subsistence and Commercialized Sectors and into Regions

The approach described above for the analysis of supply and utilization of agricultural products refers to a country as a whole. For various reasons it might be useful to divide the information collected into subsistence and commercialized sectors and into regions. Since the market policy is mainly related to the commercialized sector which expands with a country's economic development, particular attention should be given to the information referring to the market sector. The regular review of quantities of agricultural commodities handled on markets, and of the migration of the population from rural to urban areas is of particular importance.

In view of the different market situation of agricultural products in various parts of a country, and also the often inadequate transport and communication systems, the preparation of regional food balance sheets might be desirable in order to analyze supply and demand in certain regions. This is particularly important in countries where an active price stabilization project is being undertaken by the government.

Consumer Household Surveys

The regular preparation of food balance sheets and their analysis over a number of years is one method of analyzing changes in consumption patterns and identifying the main factors affecting the demand for agricultural products. However, in view of the inadequacy of statistical information on a macro-economic level, this information has to be checked or supplemented from other sources. The analysis of consumer household surveys on the demand for agricultural commodities can provide most valuable information. However, since these surveys are relatively expensive and can therefore be undertaken on only a limited scale, it should be carefully checked how far their results would be representative.

Techniques of Projecting Demand

In forecasting demand a distinction between various time periods can be made:

1. Long term projection, which refers to a period of about 20 years ahead.

2. Medium term projection, which refers to a period of from 5 to 8 years ahead.

3. Short term or annual projection, which usually refers to a period of about one year ahead or less.

Medium and long term projections of demand are basic elements in the preparation of development plans.

Annual forecasts are made at the beginning of the harvest when the harvest estimates are available. They are used chiefly for the purposes of confronting demand and supply, analyzing the likelihood of a deficit or a surplus and determining the measure to be taken to ensure a stable price development.

The future demand for agricultural products depends largely upon the growth of the population and per caput income which, to a great extent, affects per caput consumption.

Growth of Population

Projections of the total population should take into account the natural growth in population numbers and migration to and from other countries. Very often the population of a country is not known exactly in the base period, and an estimate must be made of the increase of population during the period of the projection, with a breakdown for rural and urban (farm and non-farm) population. The growth of the urban population has an important influence on investments in marketing facilities and marketing organization, and also on the pattern of consumption. Thus the natural growth in the two sectors as well as the expected migration from one sector to the other has to be estimated.

Recent figures for migration to towns can often be established indirectly, e.g., from electoral rolls, and can serve as a basis for extrapolation, taking into account expected changes in economic growth. If the demand has to be projected on a regional basis, the population growth in the different regions must be estimated.

Growth of Income and Income Elasticity

It can generally be assumed that demand for food will increase proportionately with the total number of the population, if other things remain the same. If, however, per caput income increases it can be expected that this will result in different rates of increase in the demand for different types of food.

For simplicity, the influence of income on consumption is often expressed as the income elasticity, measuring the percentage increase in consumption resulting from a one per cent increase in income. The major advantage of this coefficient is that it is independent of the units of measurement. Thus it is extremely easy to compare income elasticity in different countries or for different commodities. However, the simplicity of the coefficient should not lead to its misuse. The income elasticity usually declines when income and consumption rise.

The relationship between income and consumption can be analyzed from national annual averages (time series and international comparisons) and from budget data collected in household surveys. The time series approach, based on the analysis of past trends in income and consumption, would seem a priori the most appropriate for projection purposes. However, the limited number of years for which data are available in most countries, especially in developing countries, together with the influence on consumption, of factors other than income, often makes it very difficult to determine the income precisely. International comparisons of per caput income and consumption also provide estimates of the relationships between these two variables, but the income effect thus obtained may be biased by the influence of factors other than income. By appropriate statistical techniques the time series approach can be combined with that of international comparison to overcome some of the difficulties resulting from the scarcity of time series data.

These analyses, based on national averages, can be supplemented by a study of the consumption pattern by household, based on consumption surveys. In view of the lack of accurate time series in most developing countries, the importance of household surveys should be stressed. Such surveys, if sufficiently representative of the entire population, can provide, firstly, an estimate of consumption during the year the survey is conducted, thus contributing to the improvement of time series; secondly, a measure which cannot be obtained from any other statistical sources; and thirdly, statistical material which can be used directly for analyzing the relationship between income and consumption.

FAO has made a systematic analysis of about 100 postwar household surveys conducted in about 60 different countries. Consumption functions were fitted for the major food groups and for clothing, separately for expenditure and for quantities consumed. For several surveys it was possible to stratify the household according to size, region, social group (especially urban and rural) and the year during which the survey was carried out. It was thus possible to measure the pure income effect by a covariance technique eliminating the influence of the non-income factors.

A systematic comparison of the results derived from the analysis of household surveys, time series and international comparisons reveals the existence of general laws governing the variations in income elasticity for broad food groups in relation to consumption and income levels. In other words, human beings when placed under similar conditions behaved in much the same way wherever they are, at least as regards the broad lines of

Table 2. Approximate estimates of income elasticity by major food groups[1]

	Cereals	Starchy Pulses Roots	Nuts	Sugar	Vegetables, fruits	Fats and oils	Milk and milk products	Meat	Eggs	Fish	Calories	Animal protein	Farm value	Coffee	Tea	Coco:
LATIN AMERICA											0.30	0.60	0.47		0.80	0.6
Argentina, Uruguay	-0.3	-0.2	0.0	0.3	0.6	0.35	0.4	0.15	0.1	0.4	0.04	0.22	0.17	1.2		
Brazil, Paraguay	0.15	-0.1	0.2	0.3	0.5	0.8	0.9	0.7	1.0	0.6	0.29	0.78	0.51	0.5		
Mexico	0.0	0.0	0.2	0.4	0.7	0.7	0.7	0.8	1.0	0.6	0.30	0.81	0.58	1.5		
Central America (excl. Mexico)	0.2	0.1	0.3	0.4	0.5	0.9	1.0	0.9	1.2	0.6	....	....	....	0.5		
Others	0.2	0.1	0.3	0.0	0.6	0.9	0.8	0.8	1.2	0.4	0.43	0.80	0.61	0.8		
NEAR EAST AND AFRICA											0.40	1.16	0.68			0.8
Turkey	-0.05	0.0	0.2	1.1	0.5	0.7	0.6	1.2	1.3	1.0	0.18	0.88	0.49		0.80	
Other Near East (incl. Asia)	0.3	0.2	0.2	0.9	0.8	0.8	1.2	1.3	1.3	1.0	0.57	1.21	0.79	0.8	0.80	
North Africa	0.2	0.1	0.3	0.7	0.6	0.8	1.0	1.2	1.2	1.0	0.37	1.08	0.64	0.8	0.65	
Other Africa (South Africa)	0.4	0.1	0.2	2.4	0.8	0.8	1.3	1.3	1.3	1.0	0.39	1.08	0.64	1.5	0.80	
FAR EAST											0.62	1.49	0.89	1.5		0.8
Ceylon	0.35	0.1	0.25	0.7	0.9	1.2	2.6	1.4	2.0	0.8	0.49	1.46	0.78		0.80	
India	0.5	0.2	0.3	1.2	1.0	1.2	1.7	1.4	2.2	1.5	0.64	1.57	0.89		0.80	
Indonesia	0.5	0.2	0.3	1.5	1.0	1.2	3.0	1.6	2.0	1.0	0.54	1.23	0.79		0.80	
Japan	-0.2	-0.15	0.3	0.8	0.5	1.1	2.0	1.7	1.0	0.5	0.20	0.94	0.58	1.5		0.7
Pakistan	0.5	0.2	0.3	1.3	0.9	1.4	1.7	1.6	2.2	1.5	0.68	1.62	0.96		0.80	
Philippines	0.2	0.1	0.3	1.0	0.6	1.1	2.0	1.5	1.2	0.5	0.44	1.00	0.75		1.10	
Taiwan	0.1	0.05	0.3	1.1	0.8	1.0	3.0	1.0	1.6	0.7	0.33	0.98	0.63		1.10	
Thailand	0.2	0.1	0.25	2.0	0.8	1.1	3.0	1.4	1.8	1.0	0.38	1.31	0.72		1.10	
Greece	-0.3	0.3	0.1	-1.0	0.3	0.4	-0.7	1.0	1.0	0.7	0.12	0.87	0.49	1.0		
E E C	-0.4	-0.4	....	0.4	0.6	0.15[3]	0.3[2]	0.7	0.8	....	0.10	0.6	0.48	0.5		0.3
United States	-0.5	-0.7	....	0.0	0.25	0.03[3]	0.05[2]	0.35	0.0	0.3	-0.03	0.22	0.15	0.3		0.1

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[1] Referring to income and consumption levels in 1957-59

[2] Excluding butter

[3] Including butter

their consumption patterns. For countries where income elasticity cannot be computed owing to the lack of statistical data, it can be roughly estimated by extrapolation from the results obtained in other countries with similar levels of income and consumption. Even in countries for which income elasticity has been computed from time series and/or from household surveys, it is advisable to interpret the results of the computation with critical judgement and to select the final value to be used for projections in the light of the results obtained in other countries.

Table 2 shows very rough estimates of the income elasticity for major food groups in the developing countries and, for comparison purposes, in selected high-income countries. The Table also includes estimates of the elasticity of demand for all food expressed in terms of calories, animal proteins and farm values. The meaning of these coefficients can be illustrated as follows: if the elasticity of demand for all food in terms of calories is 0.4, a one per cent rise in per caput income would result, ceteris paribus (in particular assuming adequate supplies were available and prices remained constant), in a 0.4 per cent increase in the total calorie intake. Similarly, if the elasticity of demand for food valued at farm prices is 0.7, a one per cent rise in per caput income would result, ceteris paribus (in particular assuming constant prices and no change in the degree of self-sufficiency of the country), in an additional outlet of 0.7 per cent for food production.

Though the income elasticity is more closely correlated to the level of consumption than to income, for simplicity the trends in income elasticity can be related to the level of income. The elasticity of demand for cereals (expressed in quantities consumed) declines from about 0.5 in very low-income countries to zero in countries such as Mexico and -0.5 in the United States. For milk, eggs, sugar, and all fats and oils the elasticity is higher than unity in low-income countries but declines sharply when income and consumption rises and falls towards zero at high-income levels. For all meats the reduction is less pronounced, and in the United States income elasticity may still be as high as 0.3, though lower values are recorded in countries with a very high per caput intake such as Argentina and Australia. For food as a whole, the elasticity in terms of farm value declines from about 0.9 in the very low-income countries to 0.15 in the very high-income countries; in terms of retail value from almost unity to about 0.4 or 0.5; in terms of calories 0.8 to zero or even slightly less than zero; and in terms of animal proteins from about 1.5 to about 0.2.

If the income per caput rises by 10 per cent and if the income elasticity is 0.5, the resulting increase in per caput demand can be estimated as a first approximation to be 5 per cent (0.5 x 10). Such an approximation is legitimate as long as the increase in per caput income remains small, but for large rises in per caput income it would over-estimate the increase in per caput demand, especially in the case of cereals when the initial level of consumption is relatively close to the maximum referred to above. In this case another formula has to be used.

In low-income countries, owing to the high income elasticity of the demand for all food valued at farm prices, the total demand for food rises very rapidly in the initial stages of the "take-off". For all low-income countries outside the Sino-Soviet area it was estimated that on the high-income assumption (5.2 per cent yearly increase in national income) the demand for all food weighed at farm prices would rise by about 4.2 per cent a year, of which 2.4 per cent on account of population growth and 1.7 per cent as a result of the higher purchasing power.

In order to illustrate the application of the technique of forecasting demand the following example is given. A country with a seven-year plan is taken as the basis for a numerical example. The Central Planning Authority expects a 15 per cent increase in population and aims at a 20 per cent increase in the per caput private consumption, with price stability and no rationing. The Central Planning Authority wants to know the implications of these assumptions on the growth of the domestic demand for agricultural commodities.

To analyze this problem estimates should first be made of the final domestic demand for food expressed in terms of basic agricultural products. Next the total domestic demand for all agricultural products should be estimated taking into account the end-users other than food.

Projection of the Domestic Demand for Food

It is assumed that the total domestic food consumption can be classified into thirteen commodity groups shown in the first column on Table 3.

Table 3. Projects of the domestic demand for food (in terms of basic agricultural commodities). (Theoretical example)

Commodity (1)	Quantity consumed [a] (2)	Quantity elasticity [b] (3)	Projected demand Per Caput (4)	Projected demand Total (5)
		(Index	100=base	period)
Wheat and wheat products	60	0.3	106	122
Rice	70	0.4	108	124
Starchy roots	11	0.2	104	120
Sugar and sugar products	15	1.2	124	143
Pulses	25	0.4	108	124
Vegetables	16	0.7	114	131
Fruits	15	1.0	120	138
Meat	3	1.3	126	145
Eggs	1	1.1	122	140
Fish	3	0.9	118	136
Milk & milk products	440	1.6	132	152
Fats and oils	4	1.0	120	138
Tea	0.5	0.9	118	136

[a] In terms of kilogram per caput per year of the basic agricultural commodities

[b] Elasticity of the quantity consumed in relation to total private consumption per caput

The quantities consumed are shown in Column 2: for example, the first figure in Column 2 represents the total consumption of wheat and wheat products in terms of kilogram per caput per year of wheat equivalent. In Column 3 the elasticity coefficient 0.3 indicates that if total private consumption per caput increases by 1 per cent the per caput demand measured in kilogram of wheat equivalent would increase by 0.3 per cent. The two last columns show the indices of the projected demand per caput and for the whole population, the base 100 corresponding to the quantities consumed during the base period. The index 106 for the per caput demand corresponds to a 6 per cent increase (0.3 x 20 per cent), the index 122 for the total demand was obtained by multiplying the farmer index 106 by the population index 115.

Finally, it is essential to estimate the aggregate demand for agricultural commodities in order to check whether the total consumption estimated is feasible.

Influence of Price Changes

As a first stage, demand projections can be established on the assumption of constant prices as indicated above. But for the formulation of targets it is necessary to reconcile demand and supply projections, and for this purpose it is important to know the order of magnitude of the projections demand response to price changes. This response can be measured by the coefficient of price elasticity, which is equal to the percentage change in demand resulting from a one per cent change in prices. Since a price increase usually results in a decline in consumption, the price elasticity is generally negative. In order to eliminate the influence of a general rise or decline in price, a change in the relative price of a single commodity will be considered as having been deflated by the general retail price index.

Because of the scarcity of reliable time series already referred to, much less is known of price than of income elasticity. Moreover, the concept of elasticity is more complex for prices than for income. A distinction has to be made between the price elasticity at the retail and at the farm or export levels, between the direct price elasticity (demand for oranges in relation to the price of oranges) and the cross price elasticity (demand for oranges in relation to the price of fruit substitutable for oranges), between the price elasticity for purchased versus non-purchased food, between the short-term and long-term price elasticity.

If no other information is available, it can be assumed as a rule of thumb that when there is no close substitute for the commodity in question, as is generally the case for sugar, the price elasticity at retail is of the same order of magnitude as the income elasticity, but with the opposite sign. Consequently in absolute value the price elasticity is higher in low than in higher-income countries. When there are close substitutes, the price elasticity is in absolute terms higher than the income elasticity. As a result of this substitution effect, the price elasticity of demand for rice is higher than that for all cereals, higher for a special quality of rice than for all rice, higher for poultry than for all meats, higher for citrus than for all fruits, etc. For many developing countries the price elasticity can therefore be expected to be very high (say about -2 to -3) for lamb or for poultry or for beef, though the price elasticity for all meat would be lower (say about -1.5). If the relative price of a commodity were to rise by 10 per cent the consumers' expenditure on this commodity would remain unchanged for a price elasticity of -1.0 but would rise by 5 per cent for a price elasticity of -0.5 and would decline by 10 per cent for a price elasticity of -2.0.

In view of the size and rigidity of processing and marketing margins, the price elasticity at the retail level over estimates the impact on final demand of a price reduction at the farm or the export level. For example, if the price elasticity for oranges at the retail level was -1.5 and the value at the plantation accounted for only half of the value at retail, a reduction of 10 per cent in the producer price would result only in a 5- per cent decline in the price at retail if the margin between retail and production were perfectly rigid, and therefore in only a 7.5 per cent increase in final consumption. The price elasticity of the import demand of the high-income countries is extremely low for tea and sugar, low for coffee and cocoa (about minus one fourth), but high for long-staple cotton because of the large possibilities of substitution at the factory level between long-staple cotton and other fibers.

Since the price elasticity of the demand for cereals is lower than unity (in absolute values), an increase in the supplies of cereals will result, ceteris paribus, in a reduction of farmers' receipts. More generally, seasonal variations in supplies and yearly variations related to the influence of weather on the volume of the crops will result in sharp price fluctuations. This clearly calls for the regulation of the market through reserve stocks and marketing boards.

Other Factors Influencing the Demand for Food

The econometric analysis described above provides only a frame which has to be adjusted with critical judgement to the specific conditions of the country and to the specific characteristics of the commodity concerned. For example, per caput demand for tea in high-income countries is only slightly sensitive to changing income and prices. In a recent FAO study demand was therefore projected in these countries mainly on the basis of recent trends. In the low-income countries on the other hand, demand was projected on the basis of income and price elasticities.

Demand for a given commodity may be greatly stimulated by quality improvements and especially by better marketing facilities.

It must be stressed that the econometric approach described above applies mainly to broad commodity groups, such as cereals or meats, but cannot be used for projecting the demand for new goods or for goods which are new to the population concerned. Clearly the concept of demand elasticity would in such a case be irrelevant: starting from a consumption of zero, any future level of consumption would correspond to an infinite increase in terms of percentages and therefore to an elasticity coefficient of infinity. Appraising the market for a new food in a given population group is a typical marketing problem, like assessing the market

for coca-cola in a country, if such a country still exists, where it has not yet been introduced.

Demand for Exports

The analysis of the export prospects for a given country can be conducted in two stages. The first stage consists in an overall analysis of the prospects on the world market, with emphasis on the demand for imports. International organizations, FAO in particular, can help individual countries by providing a frame of the likely developments of world trade by commodity. The second stage of the study, the assessment of the share of the world exports the country concerned is likely to obtain, has to be conducted by the country itself within the world framework referred to above. For this purpose, it is necessary to analyze the competitive position of the country in relation to the other exporters, in particular as regards to cost of production, quality of the product, presentation, efficiency of sales promotion, etc. Such an assessment should be regularly reviewed in the light of developments in the major exporting and importing countries.

Conclusions

Demand projections have to be based on a general framework of economic growth provided by the general planner. This framework should indicate the expected rates of growth of population and income for the country as a whole, with if possible a breakdown by regions or population groups. The impact of the assumed rates of population and income growth on the domestic demand for agricultural products can be projected, assuming constant prices in the first stage. A quantity-price demand schedule can be built, in a second stage, on the basis of the demand previously projected at contant prices and of the estimated value of the price elasticity. It is again stressed that econometric techniques always imply a number of simplifying assumptions; each of these assumptions has to be critically analyzed in the light of the specific conditions of the country, and whenever possible account has to be taken of the likely impact on demand of factors other than population, income and prices.

It is more difficult to project the demand for exports than the domestic demand. Studies of the overall prospects of the world market prepared by international organizations (FAO in particular) can help individual countries in providing them with a broad frame, but each country has to make its own study within this frame so as to assess what share the country could obtain of the world market.

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FAO'S ROLE IN AGRICULTURAL MARKETING DEVELOPMENT

F. A. Shah
FAO Regional Marketing Specialist
Asia and the Far East

Introduction

The Food and Agriculture Organization (FAO) is one of the specialized agencies of the United Nations. It was set up in October 1945 to help the peoples of the world in their continuing fight against hunger and malnutrition. The need for such an agency became clear during the Second World War, which devastated agricultural production, transport and marketing systems. But it was also evident that a peaceful and healthy world could not be built upon the precarious prewar level of food supplies and their inadequate patterns of distribution.

In its early years the Organization had been concentrating on problems of raising the production of food and raw materials to meet the severe shortages following the World War II. Later, when supplies became somewhat more abundant it was noticed that producers and consumers often failed to benefit to the extent that might have been expected. Recent years have seen a change of emphasis. The 1953 and 1955 Sessions of the FAO Conference recommended that FAO should give greater attention to the need to improve the marketing of foods and other agricultural commodities, and that member countries should avail themselves of the services of professional marketing experts through the Organization's Technical Assistance Program. Assistance in marketing improvement programs is, therefore, available to all member countries. In order to meet the steady increase in demand for assistance FAO field and headquarters work has been expanded.

Range of FAO Marketing Coverage

The FAO marketing coverage broadly falls under two main categories, (a) agricultural products and (b) aspects of marketing. The former includes all agricultural products, e.g. grains, fruits, vegetables, meat and meat products, milk and milk products, poultry and eggs, sugar, tea, coffee, cocoa. oilseeds, fibers, etc.

With regard to the second category, all aspects of marketing are covered from the point of production to sale to the final consumer. In many countries the following aspects are receiving special attention,

1. The adaptation of farm programming, cultivation, harvesting, handling and sorting practices to meet improved marketing requirements.

2. Packing and transport methods notably for perishables such as animal products, fruits and vegetables, etc.

3. Construction and organization of storage and processing facilities; the provision of advice on size, type, location and business operation, and the development of appropriate arrangements for credit on products in storage.

4. Improvement of marketing channels to avoid wastage and excessive margins, and the development of new marketing organizations, e.g., wholesale auctions, cooperatives and other group marketing arrangements, integrated wholesaling and retailing enterprises, processor contract systems, government-sponsored competing agencies.

5. Standardization, grading and presentation methods to simplify handling and sales transactions, to make produce more attractive to wholesale buyers and consumers, and to enable the pricing system to guide output more efficiently.

6. Pricing methods including the correction of excessive fluctuations and elimination of monopoly practices, the provision of advice on price regulation and stabilization programs and their coordination with long term marketing improvements.

7. Distribution methods and organization; provision of plans for wholesale and retail markets; means of reducing retail distribution cost; encouragement of large-scale low-margin retailing as, e.g., through supermarkets, chain stores, consumers' cooperatives, etc.

8. Development of government marketing services, e.g., of marketing improvement and development programs, standardization, grading and quality control programs, information, training and extension services, marketing research and outlook analyses, price stabilization and other state intervention programs.

Nature of Assistance Offered

Provision of technical experts. The most effective service offered is the provision of a marketing specialist to work for some time in a particular country in response to the request made by the government concerned. The period of such a project is greatly influenced by the needs of the country concerned which are generally reflected in the terms of reference. The later may vary from the study and advice on a particular aspect of marketing to the establishment of a regular government advisory and development service including training of the personnel on the spot and the handling of various projects such as research and surveys, introduction of grade standards, regulation of markets, market news service, marketing extension, etc.

FAO marketing experts have been at work for some time in many different countries in Asia and the Far East, Near East, Africa and Latin America. In 1964, for example, there were 50 field specialists working in different countries. In Asia and the Far East Region, in particular, marketing specialists have so far been provided to Burma, Thailand, Malaysia and Indonesia. Arrangements are in hand to provide experts to Malaysia and Korea. The Government of Pakistan is also considering to ask for similar assistance to help them in the implementation of their Third Five-Year Development Program which started in July 1965. These experts help the countries concerned to improve their marketing practices on lines similar to those mentioned above. For example, in Libya the FAO Adviser has helped the government, farmers and wholesale marketing agencies to set up marketing cooperatives to establish grades and standards in citrus and livestock products and prepare the necessary legislation, to finance, set up, equip and put into operation plans to facilitate grading, packing, and treatment against insect infestation. With the cooperation of shipping companies and agencies in various parts of Europe, he has helped Libya develop new markets, arranged for trial shipments to those markets and succeeded in bringing about a great expansion in the volume of export trade, and in the prices and income received from that trade.

FAO is equally interested in studying domestic marketing procedures and promoting measures likely to increase their efficiency. A number of experts are advising in internal marketing improvements in Near Eastern countries where substantial progress has been made in the face of difficulties judged insuperable at the outset. In Iran, for example, a full-pledged marketing division has been established in the Ministry of Agriculture. A number of commodity survey reports have been published and measures have been taken to establish regulated wholesale markets, cooperative marketing societies, and a permanent institute for training and research in agricultural marketing, etc. In another country, Iraq, the marketing adviser recommended improvements in the storage of grains, introduction of grade standards, methods of purchase of food grains by the government agency, training of personnel for purchase and storage, etc. In the Far East much attention has been given to the marketing of rice. In Burma and Malaysia, FAO experts have assisted the government on the internal and export marketing of rice and in the introduction of crop grading and quality control systems. The economics of grain storage and the management of grain storage systems have been given consideration under the Technical Assistance Program in a number of countries, with a view of reducing or regulating price fluctuations, of improving management efficiency and of reducing storage and handling losses through better organization.

Some other technical assistance projects have improved the marketing of meat, milk, fruit and vegetables. In some countries, problems encountered in the handling of a specific commodity at the various stages from the producer to the consumer have been tackled, and this has resulted in a more efficient marketing organization and improved marketing information, grading and standardization services.

Marketing meetings. Governments may recommend personnel to attend specialized FAO marketing meetings in which general marketing improvement methods can be discussed. In Asia and the Far East Region, for example, a Technical Meeting on marketing was held at New Delhi, India in April/May 1959. The purpose of this meeting was to provide avenue for a general stock-taking and discussion of the relative effectiveness of various marketing improvement programs in the region. Practical marketing research and survey procedure and means of providing adequate training for marketing personnel in relation to the particular conditions of the Far East Region were other topics under consideration. The meeting was attended by 31 participants and 3 observers representing 6 Asian countries, by members of FAO and ECAFE and by one special consultant. Another Technical Meeting on Marketing Aspects of Implementing Food and Agricultural Price Stabilization Policies in Asia and the Far East was also held at New Delhi in February/March 1963. This meeting was as well jointly sponsored by FAO and ECAFE. Its purpose was to provide for the exchange of experience on the methods of implementing agricultural price policies, especially at the farm level, to study the extent to which these price policies provided effective incentives to increase production, and to discuss recent changes in food and agricultural price policies and agricultural marketing improvement programs in the region. The meeting was attended by 49 participants and experts, including one from the Philippines, from 15 Asian countries together with specialists of some international foundations. These specialists attached importance to the need for active programs of marketing extension to educate farmers in harvesting, cleaning, drying, sorting and preparing their produce so that it could meet the wholesale, retail and processing requirements, and thus enabled farmers to benefit more from the prevailing quality price differentials. The lack of uniform grading systems, quality determination equipment and properly trained and supervised staff for grading at markets or buying stations was a major impediment to the adoption of simpler and more efficient methods of sale in many countries of the region.

Marketing training courses. FAO arranges and assists the governments in planning and conducting training courses to meet the needs of particular countries or regions. At a training course on the grading and inspection of rice and the economics of rice storage operations, held in Thailand in 1953, there were 53 participants, 42 from government services and the rest from private firms and rice milling companies. In addition to the course there were demonstrations of equipment and opportunities to analyze samples of rice actually entering the export trade at that time. Valuable factual information was gathered and used by the Thai Government in establishing new standards and grades for paddy and rice. As an indication of the value of this course, the government decided to establish a permanent rice grading laboratory in Bangkok. Similar courses can be offered in fruit and vegetable packing and marketing, meat handling and marketing, grain storage and movement, market news service, etc.

During the recent years FAO has helped the governments of Korea, Thailand, Indonesia, the State of Singapore, Ceylon and Malaysia in organizing short-term national training centers on marketing. FAO provided lecturers, literature on marketing and film shows. The National Agricultural Marketing and Price Policy Training Centre in Indonesia was organized from 2 July to 4 August 1962 in which 43 senior officers from government and semi-government organizations participated. Approximately one-half of the course was devoted to lectures on various aspects of marketing, price policies and national food reserves. The other half was spent in the preparation of field exercises, collection of data, preparation and presentation of reports. For the purpose of practical training the entire class was divided into four groups and each of them was allocated one of the following subjects for study:

1. Survey of marketing margins in the case of poultry and eggs.
2. Case study of the system of marketing of rice and its impact on price at the farm level.

3. Marketing of sea fish.
4. Marketing of vegetables.

In addition to 5 lecturers provided by the FAO, the U.S.A.I.D., Ford Foundation and the local universities provided some faculty staff. Similarly short-term national marketing training centers were planned and conducted by the FAO in Korea, Thailand and Singapore during 1963. A center was organized in Ceylon in May/June 1964 and another one in Malaysia in August 1964. The present center in the Philippines is typical of this type of training centers. Another center is going to be held in Pakistan next month and one on storage of food grains in Korea some time in 1966.

With a view to meet the continuous need for training, FAO assists governments in establishing permanent institutes for training and research in individual countries and regions. The United Nations Special Fund has already sanctioned substantial funds for a regional institute in Columbia for the benefit of Latin American countries and another on national basis in Jordan.

The Latin American Agricultural Marketing Institute in Bogota, Columbia, provides training courses on three different levels: a four month course leading to the title of agricultural marketing officer; a one year course leading to the title of agricultural marketing technician; and a two year course for prospective agricultural marketing engineers. The latter course provides training in advanced economics and marketing, development planning and programming, agricultural marketing research methods, organization and management of private, cooperative and public agricultural marketing enterprises, international trade and sales methods, in addition to specialized training by commodity groups. On completion of the basic training, the agricultural marketing engineers, as well as technicians, have to spend a period of at least six months in the service of an agricultural marketing agency or private firm before they are awarded IIMA diplomas. At present, 18 future agricultural marketing engineers and 16 future marketing technicians are pursuing their second semester studies which started in August 1964 in IIMA's new building. IIMA's staff has lectured also on marketing in several short courses organized by Columbian organizations.

Great progress has been made in IIMA's research activities. A detailed feasibility study for the enlargement of grain storage network of the Columbian National Supply Institute has been finished. Also completed were studies on supply problems of basic agricultural products in Columbia and on the planning of a supermarket-type of fair price store. A further study on marketing aspects arising from the organization of five cooperative tropical fruit plantations is being finalized. A feasibility study on a wholesale/retail supply center and farmers' market at Cali, Columbia, has been started.

IIMA has entered into its second stage of development where its training and research and consulting services are also offered to Latin American countries other than Columbia.

A step of major importance for the Marketing Branch of FAO was the establishment of a permanent marketing research and training institute in Jordan. The institute is to carry out research, provide information, demonstrate marketing methods and techniques suitable for Jordanian conditions and train personnel on three different levels, namely; (1) marketing administrators and research workers, (2) marketing technicians, and (3) foremen. Particular emphasis will be placed on the demonstration side Two modern packing plants for fruit and vegetables are under construction; they will be operated by fruit and vegetable marketing cooperatives under the direct supervision of the institute's staff. The staff consists of a marketing and credit expert who is, at the same time, the Project Manager, and experts in refrigeration and cold storage; grading and inspection; marketing management; marketing research; fruit and vegetable packing and transport. Provision has also been made for the services of consultants. In the initial phase, the center will concentrate on the development of an efficient export marketing system for fruit and vegetables and during the second phase its activities will be expanded to include work on marketing problems of other commodities.

The establishment, with the help of the Special Fund, of further permanent institutes for training and research in agricultural marketing is under consideration in Pakistan, Turkey, Iran, East Africa and Nigeria.

Marketing fellowships. An important feature of the FAO program is the provision of fellowships to young men selected by the governments of their own countries to study marketing methods and administration in areas where it is more advanced. In 1964, for example, 16 fellowships were awarded in marketing and the period of study ranged from 6 to 18 months according to the needs of each fellow. These fellowships included 5 for this region, 2 for India and one each for Malaysia, Indonesia and Korea. The important aspects of the training included course work at a university followed by a study of marketing institutions and facilities. FAO also provides group of fellowships for intensive study tours with specialized training in areas of advanced marketing practices. Twelve staff members of TOPRAK, the Turkish State grain buying and storage agency, for example, were awarded fellowships in 1957 to study grain handling facilities and methods in Western Europe and North America.

Marketing information and advice from FAO headquarters and regional offices. The FAO marketing staff in Rome and the Regional Marketing Specialists stationed at the respective offices are always ready to advise on a proposal or problem, answer questions, furnish information and experience elsewhere and make personal visits where feasible. The regional staff can deal with inquiries at short notice. FAO has already prepared six marketing guides designed specifically to help the countries in improving the marketing systems. They include:

1. Marketing Problems and Improvement Programs,
2. Marketing Fruits and Vegetables,
3. Marketing Livestock and Meat,
4. Marketing Eggs and Poultry,
5. Marketing Hides and Skins, and
6. Establishment and Operation of Agricultural Marketing Boards.

This service will continue with an extended commodity marketing coverage, e.g. marketing of rice, marketing of food-grains and oilseeds, refrigerated marketing of perishables, marketing aspects of area development and settlement projects, marketing of milk and milk products. Another useful booklet is "Marketing—Its Role in Increasing Productivity" which has been published as Basic Study No. 4 under the Freedom from Hunger Campaign. The FAO international marketing bibliography assists countries in drawing on published materials available elsewhere and thus facilitates the exchange of valuable information and experience. The Regional Marketing Specialist for Asia and Far East has also published a study "Government Advisory and Development Services for Food and Agricultural Marketing, Asia and the Far East" which is expected to stimulate useful action on the part of the Governments in the region.

FAO Programs with Marketing Branch Participation

1. **UNSF East Africa livestock development project.** The Branch is participating in a Special Fund Project in East Africa designed to carry out a detailed survey of the livestock industry in the area and to draw up a development plan covering the organization of production, processing and distribution of livestock and livestock products, as well as recommendations for investment in this field. The livestock marketing economist has to assess the internal and external, present and future demand for livestock products in East Africa and to advise on the most suitable form of market organization and on the economic feasibility of establishing new livestock processing industries, with particular reference to their size, location and capital requirements. The assignment also includes advice on the present and future need for the various categories of trained marketing personnel and on the most suitable form of their training.

2. **Food processing and marketing institutes.** Some institutes for food processing and marketing are being established with the assistance of the UN Special Fund. Their purpose is to promote the development of food industries by means of applied research on technological problems

with due account of the economic aspects. Thus, marketing surveys would be conducted to determine which lines of research offer sound economic prospects. The scope for improving traditional methods of storage and processing, and applying modern methods of preservation (canning, refrigeration, dehydration) and the desirable location, size and organization of new food processing plants, will be studied. Marketing specialists can make an important contribution on all these problems and on methods of distributing processed products, demand and acceptability studies, pricing, packaging, etc.

One such project has been established in Syria; one is going to start soon in Sudan; and others are planned for Ghana, Malaysia, Senegal and Turkey.

3. **Marketing of protein rich foods.** There is increasing evidence that the main problems in expanding the use of protein rich foods in developing countries are of an economic and marketing nature rather than technological. This was the major conclusion of a FAO/UNICEF meeting with representatives of the food industries held in 1963. In collaboration with the Nutrition Division, the Marketing Branch is strengthening substantially FAO's work in this field. It is planned to carry out a series of market survey and feasibility studies. The Marketing Branch prepared a special paper for a meeting held in Japan in Spring 1964. The work is being continued.

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PART II

FIELD SURVEY REPORTS

GROUP A - REPORT

THE MARKETING OF FRUITS AND VEGETABLES IN SOME SELECTED LOCALITIES IN THE PHILIPPINES, 1965

GARRIDO, Artemio G.	Group Leader
JOSON, Ruperto L.	Member
PAMATMAT, Lolita R.	Member
PEREDO, Benjamin D.	Member
RECTO, Aida E.	Member
VENTENILLA, Felicitas S.	Member
VILLAPANDO, Mariano	Member
ARZADON Bibiano B.	Adviser

INTRODUCTION

The Nature of Supply of Fruits and Vegetables

Production of fruits and vegetables during the last decade was considered relatively favorable. From 1953 to 1962, annual production averaged 1,775,000 metric tons. Production increased at the rate of 58,000 metric tons a year. During the same period, annual importation averaged 17,000 metric tons. This represented approximately only one per cent of the total available supply. The average annual available supply was 1,750,000 metric tons. Apparently, due to increased production corresponding decreases in importation were noted. Importation decreased at the rate of 1,300 metric tons a year. Due to increased production, it might be assumed that Filipinos were able to consume more fruits and vegetables than the recommended allowances. The average per capita net available supply of fruits and vegetables was 174 grams, whereas, the recommended per capita allowances was 118 grams. The difference represented 47 per cent above the self-sufficiency level (Table 1). With increased supply and an apparent tendency of continuous increased production, it appears that markets for fruits and vegetables could be favorably developed. Domestic and foreign demands may be further improved for both fresh and processed fruits and vegetables.

Table 1. Self-sufficiency ratio for fruits and vegetables, Philippines, 1953-1962

YEAR	PRODUCTION	FOOD NET a	RECOMMENDED DAILY FOOD ALLOWANCES PER CAPITA b	PER CAPITA NET AVAILABLE SUPPLY c	SELF SUFFICIENCY RATIO
	M.T. (000)	M.T. (000)	GRAMS	GRAMS	
1953	1,495	1,404	118	173.5	147.0
1954	1,574	1,436	118	172.3	146.0
1955	1,662	1,511	118	175.9	149.0
1956	1,672	1,538	118	173.6	147.1
1957	1,762	1,583	118	173.3	146.9
1958	1,787	1,638	118	174.3	147.7
1959	1,789	1,605	118	165.5	140.2
1960	1,824	1,636	118	163.4	138.4
1961	2,007	1,796	118	173.8	147.2
1962	2,178	1,958	118	183.4	155.4
Average	1,775	1,610	118	173.9	147.4

a Production plus gross imports minus gross exports, animal feed, manufactured and waste.

b Source: FNRC Publication No. 76 (Revised, January 30, 1963).

c Average for leafy vegetables, vitamin C rich foods, other fruits and vegetables. Source: National Economic Council (OSCAS). The Statistical Reporter, Vol. 7 (4), October-December 1963.

Objectives of the Study

1. To determine the marketing practices adopted by the fruit and vegetable producers at the different levels of marketing.
2. To study the market structure for fruits and vegetables.

Methodology

The samples were selected purposely. Eight producers, 5 wholesalers, 2 processors and 8 retailers of fruits and vegetables were interviewed from September 21 to 24, 1965. Different types of information were recorded in prepared questionnaires. Simple averaging was used where relatively sufficient records were available. Table 2 shows the distribution of records gathered.

The major limitation of this study is the limited number of respondents. Therefore, the results discussed in this paper does not attempt to represent the country's or even the whole area marketing situation for fruit and vegetable.

Table 2. **Distribution of records for the different levels of fruit and vegetable marketing, 1965**

LEVELS OF MARKETING	PLACE	NUMBER OF RECORDS
Producers	Calamba, Laguna	2
	Baguio City	6
Wholesalers	Manila Metropolitan	3
	Baguio City	2
Processors	Cabuyao, Laguna	1
	Quezon City	1
Retailers	Manila Metropolitan	3
	Baguio City	5
TOTAL		23

FARMER MARKETING

Production

The first farmer interviewed in Calamba, Laguna cultivated 17.5 hectares of land and the second, .5 hectare. Of the total land area operated by the first farmer, 15 hectares were owned and 2.5 rented. The second farmer rented his land.

In Baguio, the average size of vegetable farm was 4.7 hectares and that of the fruit, 1.5 hectares. Of the six reporting producers in Baguio, 3 operated solid vegetable farms, 1 fruit farm and 2 combined fruit and vegetables.

The farmer in Case I in Calamba, Laguna, utilized 57 per cent of the land for producing ampalaya, 23 per cent for camote and the balance for eggplant and other vegetables. The second farmer equally proportioned his land to vegetables such as kinchay, pechay, green garlic, lettuce, cauliflower and mustard.

The pattern of land utilization of farmers in Baguio is shown in Table 3. Majority of the farms used the greater proportion of their land in the production of potatoes and cabbages. On the other hand, the greater part of the fruit farm seemed to have been used in producing bananas, pineapples and strawberries.

Table 3 also indicates the amount of production for various vegetables and fruits produced by the 6 reporting farmers in Baguio. Of relative importance in terms of size of production and/or potential marketable surplus were cabbages, potatoes, lettuce, pepper, pechay and celery for vegetables and bananas, strawberries and pears for fruits.

Records on vegetable production of Farmer 1 in Calamba were not made available. However, the volume of sales in Table 4 would more or less indicate the magnitude of production. Of relative importance in terms of size of sales were ampalaya, upo, eggplant and camote. Farmer 2 reported that on the average he raised 15 kilos of kinchay per week, 10 kilos of green garlic, 6 kilos of pechay, 10 kilos of lettuce, 10 kilos of cauliflower and 5 kilos of mustard. It would be noted that there is more variation in kinds of vegetables produced in Baguio than in Calamba. This is accounted primarily by the differences in climatic conditions.

Table 3. **Type of land utilizaton and production, 6 producers, Baguio City, 1965.**

TYPE OF LAND UTILIZATION	NUMBER REPORTING	UNIT	AREA CULTIVATED	TOTAL PRODUCTION
Vegetable				
Cabbage	5	kilo	1.6	24,000
Potato	5	kilo	2.3	15,150
Pepper	2	kilo	0.3	2,270
Lettuce	3	head-kilo	0.4	7,467
Celery	2	piece-kilo	0.2	2,040
Carrot	1	kilo	0.1	500
Beans	1	kilo	0.1	500
Peas	1	kilo	0.1	500
Pechay	1	kilo	0.5	2,500
Cauliflower	1	kilo	0.5	1,000
Tomato	1	kilo	0.5	5,000
Fruits				
Strawberry	1	kilo	1.0	10,000
Banana	1	piece	3.0	30,000
Pineapples[a]	1	piece	3.0	2,000
Pears	1	piece	0.25	8,000
Sunkist	1	piece	0.25	4,000

[a] Planted in-between rows of banana trees.

Volume of Sales and Gross Receipts Obtained

Table 4 indicates the volume of sales and income obtained by Farmer 1 in his marketing of vegetables. For his sales in four months, ampalaya accounted for ₱2,233; upo, ₱453; camote, ₱409; and eggplant, ₱258. Farmer 2 reported that all his produce were sold. He obtained most of his revenues from kinchay represented by ₱18 gross sales per week and from green garlic, ₱12. Revenues obtained from pechay, lettuce, cauliflower and mustard were relatively low.

Table 4. Volume of sales and gross receipts by months, Case I, Calamba, Laguna, 1965

Product	Unit of Sales	MONTH								
		April		May		June		July		Total
Ampalaya	Piece	2,908	₱520.68	9,256	₱817.78	6,839	₱675.40	1,848	₱219.14	₱2,233.00
	Kaing	—	—	4	58.50	3	10.50	7.75	34.70	103.70
Upo	Piece	47	3.80	1,682	180.03	1,024	137.32	738	131.60	452.75
Eggplant	Piece	—	—	1,905	24.37	2,485	40.70	11,195	192.42	257.49
	Kaing	—	—	—	—	—	—	8	13.00	13.00
Camote	Piece	—	—	—	—	1,200	4.00	—	—	4.00
	Sack	—	—	—	—	74.5	319.50	16	77.90	397.40
	Can	—	—	—	—	2	7.37	—	—	7.37
Patola	Piece	—	—	—	—	25	0.60	57	12.25	12.85
Batao	Bundle	40	3.03	—	—	—	—	—	—	303

The marketable surplus disposed of and the revenues obtained by Baguio fruit and vegetable producers are shown in Table 5. Of relative importance were potatoes from which farmers obtained an average of ₱6,722; lettuce, ₱6,285; cabbages, ₱6,077; and tomatoes, ₱4,000. Strawberry was the most important fruit produced. It gave a revenue of ₱11,500.

Table 5. Amount of fruits and vegetables marketed and value of sales obtained, 6 producers, Baguio City, 1965

PRODUCT	UNIT	AMOUNT SOLD	PRICE PER UNIT a	TOTAL VALUE PER FARMER
			(PESO)	(PESO)
Vegetables				
Cabbage	kilo	24,494	0.25	6,077
Potato	kilo	15,060	0.45	6,722
Pepper	kilo	2,735	0.55	1,504
Lettuce	head-kilo	7,449	0.84	6,285
Celery	piece-kilo	2,026	0.98	1,882
Carrot	kilo	470	0.70	329
Beans	kilo	470	0.40	188
Peas	kilo	470	2.15	1,010
Pechay	kilo	2,500	0.20	500
Cauliflower	kilo	1,000	0.80	800
Tomato	kilo	5,000	2.80	4,000
Fruits				
Strawberry	kilo	10,000	1.115	11,500
Banana	piece	25,000	0.02	500
Pineapples	piece	1,000	0.28	280
Pears	piece	4,000	0.02	80
Sunkist	piece	2,000	0.04	80

a Weighted.

Number of Sales

The number of sales done by Farmer I in Calamba to dispose of all his products varied widely (Table 6). For some products only one sale was done whereas, for ampalaya, for example, sales were done more than once. Chances are that, the volume of sales per unit of time was relatively low. This might have affected the farmer's costs of marketing. Efficient storage may reduce this cost. Low sales per unit of time was exemplified by Farmer 2 who sold vegetables regularly twice a week. Some farmers in Baguio reported that sales were done weekly, twice a week and/or annually. Weekly sales were more common.

Table 6. **Number of sales per month and/or frequency units of sales were reported, Case 1, Calamba, Laguna, 1965.**

PRODUCE	UNIT OF SALES	MONTH			
		APRIL	MAY	JUNE	JULY
Ampalaya	piece	30	47	40	30
	kaing	—	4	1	6
Upo	piece	3	19	11	28
Eggplant	piece	—	9	11	28
	kaing	—	—	—	5
Camote	piece	—	—	1	—
	sack	—	—	12	4
	can	—	—	1	—
Potato	piece	—	—	1	5
Batao	bundle	1	—	1	5

Units of Sales and Prices Received

There was wider variation in unit of sales for some vegetables sold in Calamba than for those disposed of in Baguio. For example, Farmer I in Calamba sold ampalaya and eggplant by piece and by kaing, respectively, and camote either by the piece, sack and can. On the other hand, some farmers in Baguio sold lettuce either by the head and/or by weight (kilos) and likewise for celery.

The lack of standardized unit of sales may be disadvantageous to producers because prices received may not be meaningful and realistic.

Another disadvantage of variation in unit of sales is the difficulty in price reporting. Table 7 shows prices per unit of sales received by Farmer 1 in Calamba for four months. Farmer 2 sold all vegetables by weight (kilo).

A farmer in Baguio sold lettuce at ₱0.05 per head and another at ₱0.80 per kilo. In terms of sales by weight, a difference of ₱0.73 per kilo was noted. Undoubtedly, the farmer who sold by weight obtained a higher revenue than the one who sold by piece. Another example is in the case of sales for celery. A farmer sold celery by weight and another by piece. In terms of sales by weight, the former received ₱1.25 per kilo and the latter, ₱0.70.

Table 7. **Price per unit by months, Case 1, Calamba, Laguna, 1965**

PRODUCE	UNIT OF SALES	MONTH			
		APRIL	MAY	JUNE	JULY
		(₱)	(₱)	(₱)	(₱)
Ampalaya	piece	0.18	0.09	0.10	0.12
	kaing	—	14.62	3.50	4.48
Upo	piece	0.08	0.11	0.13	0.18
Eggplant	piece	0.08	0.01	0.02	0.02
	kaing	—	—	—	1.62
Camote	piece	—	—	0.003	—
	sack	—	—	4.28	4.87
	can	—	—	3.68	—
Patola	piece	—	—	0.02	0.21
Batao	bundle	0.08	—	—	—

Market Outlets

Farmer 1 in Calamba who was relatively a larger producer than Farmer 2 had wider market outlets. During months of low harvest he sold his vegetables to local public market and during high production months, to Manila and nearby towns. The only outlet of Farmer 2 was the local public market. A difference between the two farmers was also noted in terms of product assembly. During peak months of supply, it was noted that some vegetable collectors had approached Farmer 1. A number of sales were done right on the farm.

Unlike the Calamba producers, the major market outlets of Baguio farmers for most vegetables sold were the wholesalers. Retailers ranked second in importance and the agent buyers, third. The difference in terms of market outlets (number and scope) between the Calamba and Baguio producers is seemingly due to the size and/or volume of sales. In fact, a number of Baguio producers sold their vegetables by contract. A farmer even disposed of his vegetables by consignment. Manila served as the major market outlet of vegetables grown in Baguio.

Method and Time of Payment

Producers in Calamba were paid either in cash or in credit. Payment for credit sale was made after the buyers have disposed of the products. Credit settlement was usually done in the afternoon of the day of sale or during the following day. Majority of the farmers interviewed in Baguio made cash sale. A case was reported for advanced-credit. Advanced payment which indicated contract sale was done one week to one month before harvest. Settlement of credit buyers of vegetables was done before the second shipment of the produce was made.

Pre-sale Marketing Practices

Cleaning. In general this process constitutes the washing of vegetables to remove bits of soil and the elimination of spoiled parts by hand operation.

Grading. Except for Farmer 2 in Calamba, grading for some vegetables were done. Depending upon the product characteristics which varied widely, some of the criteria used in grading were size, color, maturity, thickness, softness and dryness. Nevertheless, no set of standard method of grading was followed. Farmer 1 in Calamba sold 69 per cent of ampalaya as first grade; 30 per cent, second grade; and 1 per cent, third grade. Sixty-nine per cent of the eggplant sold by the piece was classified as first grade; 22 per cent, second grade; and 9 per cent, third grade. For those sold by the kaing, 62 per cent was of second grade and 38 per cent, first grade. Almost all of the upo were sold as first grade. The size of production and/or marketable surplus appears to influence the decision as whether to grade the product or not and as to who would grade the product itself. For Farmer 1 in Calamba, it was reported that grading was decided and done by the buyers. On the other hand, grading of vegetables in Baguio was done by the farmers themselves.

Storage. Storage of vegetables by Calamba producers was done on a very limited degree. The type of containers used ranged from aluminum basins to cardboard and wooden boxes. Vegetables were kept at ordinary room temperature. In Baguio, storing of vegetables among producers depended upon the characteristics (perishability) of the products. For example, it was reported that potatoes were more commonly stored than the other vegetables. Potatoes were placed in boxes and meshed bags or dumped in relatively small warehouses. Aeration was considered while the vegetables were in storage. Two farmers reported that potatoes were stored from 3 to 4 months. In general, limited storing was done for most vegetables produced in Baguio. In this connection, severe seasonal price fluctuation could be expected.

Packing, assembly and transportation. Producers interviewed in Calamba reported that gunny bags were used in pre-packing some vegetables produced. Kaings were used in the disposal. In Baguio, potatoes were packed in bags usually weighing 25 kilos and for lettuce and cabbages, in bamboo baskets weighing 70 to 90 kilos. The latter appears too heavy to be conveniently handled by a person. It could be implied that much spoilage occurred in handling.

To a certain degree, assembly of vegetables in Calamba was done right at the farm. This practice was done during peak months of harvest. In Baguio, assembly of products generally occurred at the farm regardless of season. Assembly was done by wholesalers whose major outlets were Baguio and Manila cities. Vegetables in bamboo baskets and meshed bags were loaded by laborers in trucks or passenger buses. In one case, airplane was used in transporting strawberry to Manila. Cost of transportation was commonly handled by the buyers. The cost of transportation by truck to local market ranged from P0.05 to P0.10 per basket, and to Manila markets, P0.03 per kilo. In Calamba, vegetables were transported to local public market either in calesas or jeepneys. For sales outside Calamba, jeepneys or buses were used. Costs of transportation were not made available by producers interviewed in Calamba.

Financing. Five Baguio farmers reported that they acquired all or a part of their capital from banks and private moneylenders. Those whose capital were partly borrowed reported that 50 per cent to 80 per cent of the total capital were owned. The sources of borrowed capital were the banks represented by the Development Bank of the Philippines, Philippine National Bank and the Rural Banks. The 5 reporting farmers borrowed from banks but two of them also obtained loans from private moneylenders. The banks charged 4 per cent to 12 per cent interest a year, whereas, private moneylenders, 18 per cent to 60 per cent.

WHOLESALE MARKETING

Procurement

Of the total volume of vegetables purchased weekly by wholesalers, 69 per cent came from producers and 31 per cent from other wholesalers. For cabbage alone about 24,000 kilos or 67 per cent were purchased from farmers and around 12,000 kilos or 33 per cent from wholesalers. For potatoes, 10,700 kilos or 60 per cent came directly from producers and 7,200 kilos or 40 per cent from wholesalers. Breakdown of the total volume purchased by sources and by kind is shown in Table 8.

Table 8. Weekly purchases of vegetables by source and kind, 3 (Manila) and 2 (Baguio) wholesalers, 1965

Kind	Quantity			
	Producers		Other Wholesaler	
	Kgm	Per cent	Kgm	Per cent
Cabbage	23,985	67	11,982	33
Potato	10,700	60	7,200	40
Carrots	—	—	600	100
Green Onion	15,000	98	315	2
Pechay	9,500	58	7,000	42

Prices paid and total value of the products are shown on Table 9.

Table 9. Prices paid and total value of vegetables for the weekly purchase, 3 (Manila) and 2 (Baguio) wholesalers, 1965

Kind	Prices paid and total value			
	Producers		Wholesalers	
	Price/kilo	Value	Price/kilo	Value
Cabbage	₱0.35	₱8,394.75	₱0.40	₱4,792.80
Potato	0.45	4,815.00	0.50	3,600.00
Carrots	—	—	0.45	2,700.00
Green Onion	0.30	4,500.00	0.37	116.55
Pechay	0.32	3,040.00	0.35	2,450.00

Pricing of the commodity purchased is usually based on the following grades:

Commodity	Grades	Price/Unit (kilos)
Potato	Big	₱0.55
	Medium	0.45
	Small	0.25
Pechay	Big	0.40
	Medium	0.30
	Small	0.20
Carrots	Big	0.45
	Medium	0.35
	Small	0.25
Cabbage	Hard	0.45
	Soft	0.30

Four out of the 5 wholesalers studied paid cash for vegetables bought. One paid in advance. Two wholesalers reported that payment was done immediately after sale and three, one to two days later.

Disposal

The major outlet of vegetables of wholesalers was other wholesalers. Of the total volume handled weekly, 68 per cent was channeled to the other wholesalers and 32 per cent to retailers (Table 10). The highest volume of business for cabbage, potatoes, etc. was reported to have occurred during the summer months and the lowest, during the months of June and July.

Table 10. Weekly disposal of vegetables by outlet and kind, 3 (Manila) and 2 (Baguio) wholesalers, 1965

Kind	QUANTITY			
	Wholesalers		Retailers	
	kgm	Per cent	kgm	Per cent
Cabbage	19,190	67	9,590	33
Potato	10,065	60	6,800	40
Carrots	—	—	500	100
Green Onion	12,200	98	250	2
Pechay	7,800	58	5,700	42

Prices received and total revenue obtained are shown on Table 11.

Table 11. Prices received and total revenue obtained from weekly disposal of vegetables by outlet and kind, 3 (Manila) and 2 (Baguio) wholesalers, 1965.

Kind	Prices Received and Total Revenue			
	Wholesalers		Retailers	
	Price/kilo	Revenue	Price/kilo	Revenue
Cabbage	₱0.75	₱14,392.50	₱0.80	₱7,672.00
Potato	0.75	7,548.75	0.75	5,100,00
Carrots	—	—	0.70	350.00
Green Onion	0.63	7,686.00	0.65	162.50
Pechay	0.60	4,680.00	0.65	3,705.00

Baguio wholesalers disposed of their products in Manila and seldom within the vicinity of assembly. It took them one to two days to dispose of their vegetables. It was reported that the availability of transportation in the area influenced the length of disposal. Transportation cost ranged from P0.02 to P0.03 per kilo depending on the distance travelled and the kind of commodity handled. For leafy vegetables transportation cost is usually P0.02 a kilo from Baguio to Manila and P0.03 a kilo for potatoes. Vegetables were transported in trucks.

Storing is seldom practised by wholesalers, and if ever resorted to, it is only because of the inability to dispose of them all on the same day.

All wholesalers interviewed used bamboo baskets as containers. Spoilage was estimated to range from 20 to 30 per cent of the total volume purchased. It was mentioned that much of the spoilage occurred during the handling and transporting of vegetables.

Table 12 shows the price differential for vegetables handled by the wholesalers. In general, the price differential obtained from retailers was larger than those received from the wholesalers.

Table 12. Price differential obtained by outlet and kind of vegetables sold, 3 (Manila) and 2 (Baguio) wholesalers, 1965

Commodity	Buying Price [a]	Selling Price		Price Differential	
		Wholesaler	Retailer	Wholesaler	Retailer
Cabbage	P0.38	P0.75	P0.80	P0.37	0.42
Potato	0.48	0.75	0.75	0.27	0.27
Carrot	0.45	—	0.70	—	0.25
Green Onion	0.34	0.63	0.65	0.29	0.31
Pechay	0.34	0.60	0.65	0.26	0.31

[a] Average price paid to producers and other wholesalers.

MARKETING OPERATIONS OF THE PROCESSORS

Two processors were studied; one deals mainly with fruits and vegetables while the other deals with fruits and vegetables and canned meat. These processors present two distinct cases and therefore will be discussed separately. The first is of the integrated type. He produces his own vegetables. The second buys all his raw materials and processes them. Whereas the former has his own distributing company, the latter distributes the finished products directly to the retailers.

Case One. This is a closed corporation located about 45 kilometers from Manila. It is managed by an agriculturist. The food technologist and the auditor are his sisters.

The enterprise started only from mere kitchen experiments in 1956. Two years later they started commercializing the business. At the start it operated a four-hectare land for growing vegetables and a small plant for processing. In 1963, it expanded considerably. With the help of the Industrial Development Center the four-hectare vegetable farm was increased to 60 hectares. The processing plant was expanded and more buildings were constructed.

All the vegetables are owned produce except for cauliflower and onions. These are bought from Manila wholesalers whose supply comes from Baguio (in the case of cauliflower) and Nueva Ecija (in the case of onions). Fruits are purchased from several provinces: Batangas for mandarin, Laguna for pineapple, Rizal and Cebu for mangoes and the neighboring towns for papaya.

Seeds are imported from the United States. Some of the seed prices per pound are as follows: cucumber, P8.95; pepper, P37 to P56; and tomato, P43.50 to P64.00. The processor of these seeds surveys the temperature and soil of the farm every year in order to check the adaptability of these seeds to Philippine environment.

Vegetables purchased outside the factory constitute 10 per cent of the total value of vegetables processed. Purchased fruits represent almost 80 per cent of the total value of fruits. Cauliflower and onions in sack are bought at the Manila market. Fruits are delivered to the factory by the producers. Samples are inspected before any arrangement for the purchase is made. Fruits are graded on the basis of color, texture, size, maturity and presence of diseases. About three per cent of the total products which farmers sell to them is rejected. In the case of owned produced vegetables, grading is done even in the production stage. For instance, cucumbers are allowed to grow only up to a certain size. Spoiled vegetables are used as hog feeds.

The field is utilized from January to June and it remains idle for the rest of the year. The processing machineries are used from 6 to 7 months because of lack of raw materials.

The company produces quite a number of products. Among them are pickles (sweet gerkins, sweet mixed, sweet relish, hot sweet, sour mixed, hot sweet mixed and dill pickles), sweet corn, fruit cocktail, mandarin oranges, whole pimientos, tomato sauce, tomato juice, peeled whole tomato, worcestershire sauce, and fruit juice. In 1964 the enterprise made a total sale of P436,156 distributed as follows: pickles, 62 per cent; fruit cocktail, 27 per cent; tomato sauce, 4 per cent; mandarin oranges, 2 per cent; sweet corn, 2 per cent; and others, 3 per cent.

All the finished products are channelled through the Young and Baldwin Co. (Macondray) which takes charge of the distribution. This company receives 15 per cent of the gross sales. The processor delivers the finished products to the distributing company four times a month. Each delivery costs the processor P50. Promotional activity includes only advertising which accounts for 10 per cent of the gross sales.

Two general comments given by the manager are as follows: (1) the government should help in the standardization of agricultural products. The finished products could not be exported because they are not standardized; (2) establishment of food inspection service. In addition, the manager said the farmers should be educated.

Case Two. The other processor is also a closed corporation which started three years ago. It is managed by two brothers and is located in a residential district in Quezon City.

Raw materials are purchased both from domestic and foreign markets. Tomatoes, onion, garlic and pepper are purchased from a local middleman. Beans, olives and pickles are imported. The latter two are repacked. A number of products are also produced. In general, canned meat constitutes the bulk. Of the total raw materials used 35 per cent is imported.

In purchasing locally produced vegetables the manager is not very particular of the grade of the produce because they are used only as a constituent of canned meat. One important problem is the insufficiency of raw materials. Another problem is the severe fluctuation of prices, for instance tomato price is lowest in the months of June and July, P0.20 per kilogram and highest in September, P1.20 per kilogram.

The processing machineries are used only for 6 days a week, 2 days of which are for bottled goods such as pickles, white pepper, bagoong, etc. and four days for canned meat. The size of output per day is 2,000 bottles and 4,000 cans of food products. The major costs of operation are the raw materials, 80 per cent; and labor, 15 per cent. An empty bottle costs P0.11 and a cap, P0.06.

The products are distributed only in the Luzon area. Manila and suburbs constitute 60 per cent of the total market. Sales are mainly on a cash-on-delivery basis (80 per cent). Credit is extended only to big and well known groceries. A constant price is maintained for their products. High sales occur during the Christmas season and at the start of the school year. Low sale is from March to May.

Promotional activities include advertisement and giving out of samples for new products. Five per cent of the gross sale is spent for advertisement.

The major problem of the enterprise is the lack of capital.

MARKETING OPERATIONS OF RETAILERS

Eight retailers were interviewed, 5 in Baguio City and 3 in Manila. One of the 5 respondents in Baguio was a wholesaler-retailer. Two out of the five Baguio retailers specialized in vegetable retailing and 3 in bananas and vegetables. Two of the 3 Manila retailers interviewed dealt in vegetables, and one in fruits. Fifty per cent of all retailers sold other commodities aside from fruits and vegetables. The Manila retailers handled 7 to 8 kinds of fruits and vegetables whereas, Baguio retailers 3 to 7 kinds.

Procurement

All Baguio retailers interviewed bought their stock directly from producers while those in Manila from wholesalers (Table 12). The source of stock was selected on the basis of convenience. A source was normally considered a regular supplier. Although quite a number of vegetables were handled by the retailers, only a few would be discussed in detail in this paper. A wide variation was noted in the quantity of vegetables purchased per week by each retailer — 14 kilograms of pepper, 108 of Baguio beans and 270 of potatoes. The wholesaler-retailer purchased from 1,000 to 2,000 kilograms of vegetables per week. It was noted that the wholesaler-retailers bought their supply at a much lower price than the retailers. This could be explained by the bigger volume bought by the former. All vegetables were purchased by weight (kilogram). In Manila, pepper was bought by the hundred pieces.

Table 13. Weekly purchase of vegetables by place, source and kind, 5 (Baguio) and 3 (Manila) retailers, 1965

Kind	Producers (Baguio)			Wholesalers (Manila)		
	Quantity	Price / Unit	Value	Quantity	Price/ Unit	Value
	kgm.	Pesos		kgm.	Pesos	
Cabbage	2,000[a]	0.30	600.00	60	0.58	33.80
Pechay	14	0.80	5.60	35	0.40	14.00
Baguio beans	108	0.52	51.00	—	—	—
	1,000[a]	0.33	330.00	—	—	—
Pepper	21	0.50	10.50	3[b]	2.25[c]	6.75
	1,000[a]	0.20	200.00	—	—	—
Potatoes	270	0.70	189.00	—	—	—
	2,000[a]	0.38	760.00	—	—	—
Carrots	—	—	—	20	0.65	13.00

[a] Wholesaler-retailer
[b] Hundred pieces
[c] Pesos per hundred pieces

The price of cabbage in Baguio was ₱0.28 lower than that in Manila. The reverse was true in the case of pechay. Baguio price for pechay was higher than that in Manila by ₱0.40 per kilo. This may be accounted for by the difference in the size of the vegetable. Pechay in the Manila retailers' store was very much smaller than those in Baguio.

The frequency of procuring supply ranged from daily to weekly basis (Table 14). Four out of the eight retailers purchased daily and three, weekly. One retailer procured his stock thrice a week.

Table 14. Frequency of procuring stock, 5 (Baguio) and 3 (Manila) retailers, 1965

FREQUENCY OF BUYING	NO. REPORTING	PER CENT
Daily	4	50
Thrice a week	1	12
Weekly	3	38
Total	8	100

Five out of eight retailers purchased graded vegetables. Grading was based mainly on size.

Most of the retailers obtained their supply on cash basis. Where purchase on credit was practised, settlement was done within a relatively short period.

Disposal

All retailers surveyed except one, sold their vegetables to consumers. Table 15 shows the weekly volume disposed.

Table 15. Weekly disposal of vegetables by outlet, type and market, 5 (Baguio) and 3 (Manila) retailers, 1965

Kind	CONSUMERS						OTHER RETAILERS[a]		
	Baguio			Manila			Baguio		
	Quantity	Price/ Unit	Value	Quantity	Price/ Unit	Value	Quantity	Price/ Unit	Value
	kgm.	Pesos		kgm.	Pesos		kgm.	Pesos	
Cabbage	600	0.70	420.00	60	1.00	60.00	1,400	0.50	700
Pechay	14	1.00	14.00	30	0.60	18.00	--	—	—
Baguio beans	533	0.48	255.84	—	—	—	700	0.50	350
Pepper	650	0.35	227.50	30	0.80	24.00	700	0.40	280
Potatoes	810	0.72	583.20	—	—	—	1,400	0.60	840
Carrots	—	—	—	20	1.00	20.00	—	—	—

[a] Sold by the wholesaler-retailer

A mark-up of P0.40 per kilo for cabbage bought and sold in Baguio was noted. The mark-up for the same vegetable in Manila was P0.42 per kilo. The mark-up for a pechay was P0.20 both in Manila and Baguio markets.

Consumer Behavior

The retailers reported that consumers often bought one-half or one kilo of vegetables. The retailers observed that consumers inspected the fruits and vegetables purchased. In the case of some fruits like lanzones, the consumers tasted first before purchases were made.

The most common complaints received by retailers from consumers were high price and unscrupulous weighing.

COOPERATIVE MARKETING OF VEGETABLES

Two Farmers' Cooperative Marketing Associations both of which deal primarily with vegetables were included in the study. One is a Federation of five FACOMAS with 1,500 members. In the early years, they were successful as shown by the interest of farmers in marketing vegetables through the cooperatives. However, this initial success lasted only for a very short time because the FACOMAS met competition with Chinese middlemen. When the FACOMAS bought vegetables from farmers the Chinese raised their buying price. Conversely, when the cooperatives sold the vegetables to Manila, the Chinese lowered the price to attract more buyers. In view of a much larger volume of commodities handled by the Chinese and a much bigger capital over the FACOMAS, the Chinese could afford to have a very small margin of profit per unit of commodity handled. Also, for a period of time, the Chinese were able to stand a minimal loss by underselling the cooperatives until the FACOMAS had to get out from the picture as they could not afford to stand the loss. Presently, the FACOMAS are more or less a purchasing cooperative—serving the farmers only through providing them with fertilizer and seeds at nominal prices.

CONCLUSIONS AND RECOMMENDATIONS

Based from the findings of this study the following conclusions were arrived at:

1. Baguio farmers have relatively larger farms than the Laguna farmers. The former utilized their land more intensively than the latter. Hence, Baguio farmers have relatively larger marketable surplus than the Laguna producers. The whole marketing processes revolve around the size of marketable surplus.

2. The amount of product sold by an individual farmer in Laguna was relatively small. In some instances, however, a relatively large number of sales per farmer per kind of product was noted in Baguio.

3. The marketing operation appears to be relatively complex. Duplication of marketing services and/or additional marketing seemed to have been incurred. For example, some wholesalers procured their vegetables from other wholesalers and disposed of them to the same type of outlet.

4. The choice for the time of disposal and for the type of outlets appear to have been limited by the small-size marketable surplus, especially in the case of Laguna farmers.

5. The type of marketing facilities used such as storage, packaging, types of transportation means were apparently affected by the size of mar-

ketable surplus. Because of limited marketable surplus, it seems there is little attention given in improving these facilities. Apparently, the present type of storage and transportaton facilities used are not economical from the viewpoint of reducing marketing costs. Much losses were reported to have occurred with the use of the present types of storage and transportation facilities. The type of storage facilities used do not even guarantee a constant supply of vegetables which are abundantly produced (ampalaya, cabbage and onions) within one season (three months after harvest).

Hence, the lack of effective storage facilities contribute to seasonal price fluctuation.

6. Standardized measures and grades are lacking. Vegetables were sold in varied units. This poses a problem in the pricing mechanism.

7. Remarkable differences in price quotations for one product sold in the same place and time were reported. This indicated the lack of market information.

8. Some farmers still depend for capital to a certain degree upon private moneylenders. The latter charged relatively high rates of interest. In some cases, the lack of capital was aggravated by the tie-up of capital to some dealers who purchased on credit.

The recommendations that might help improve the marketing situation for fruits and vegetables are as follows:

1. **Cooperatives or organized markets for farmers.** This approach would enable the producers to pool their products. The following are expected to materialize under the pooled-product system of marketing:

a. **Acquisition of better marketing facilities.** With sufficient volume of products to operate on, the marketing facilities could be used efficiently, i.e., with reduced costs of marketing.

b. **Wider choice in time of disposal and place of market outlets.** Farmers would be able to exercise wider and more objective decisions in relation to the disposal of agricultural products and other related marketing activities. Proper timing in the sale of products could help the farmers adjust their production programs and increase their farm incomes.

c. **Ability to adopt standard measures and grades.** With sufficient quantity of marketable surplus, farmers would be able to grade their products and to sell them in more standardized units. Thus, they might be able to obtain premiums and increase their income.

d. **Better utilization of market information.** Organized markets could use market information more effectively than an unorganized market.

e. **Organized markets increases bargaining power.** Increased bargaining power would make possible farmers to borrow funds from banking institutions.

f. **Organized markets among farmers would help minimize the duplication of marketing services and/or additional marketing costs.**

2. **Organized wholesale terminal markets.** These should be established in relatively large consuming areas like Manila. Organized wholesale markets would help insure constant flow of the products through time at minimum costs and stabilize prices. Also, it would help reduce some market complexities.

3. **Established extension service.** This program should be provided to more or less guarantee the continuity of the implementation of some marketing measures designed to improve the marketing situation.

4. **Adaption of food inspection service and other marketing programs.** The food inspection service should be designed to help create greater demand for locally processed fruits and vegetables. Also food inspection service like standardization is a must in the advent of exporting processed fruits and vegetables to foreign markets.

5. **Accessible banking institutions.** For more intensive production and better distribution of fruits and vegetables, liberal credit should be extended to the farmers. Capital should also be extended to processing sector especially at this infant stage of the industry.

* * *

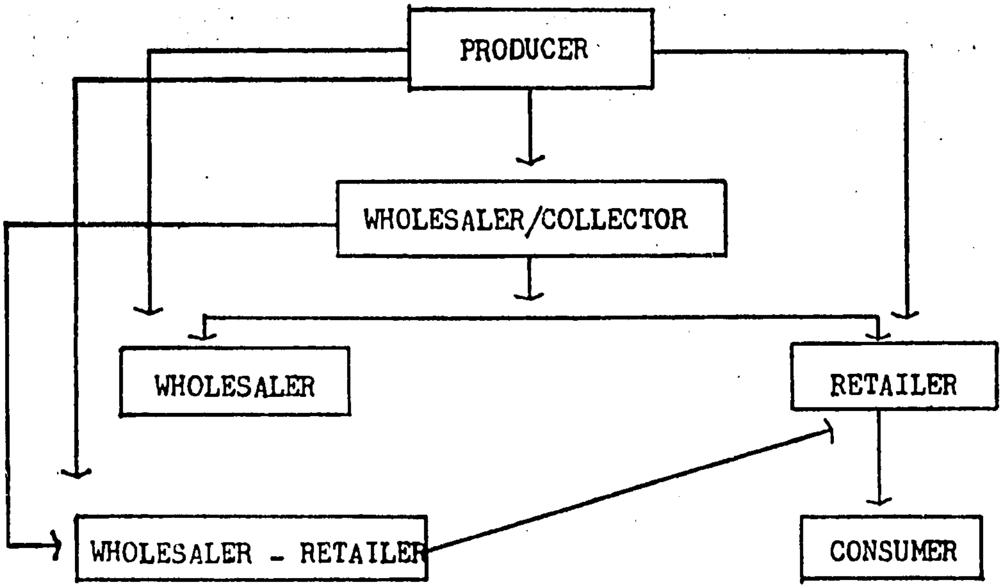

FIGURE 1. The Marketing Channels for Vegetables

GROUP B - REPORT

MARKETING OF POULTRY AND EGGS

QUINTANA, Vicente U.	Group Leader
AUSTRIA, Ignacio V.	Member
BANDONG, Francisco C.	Member
CALAYAG. Benjamin S.	Member
GATDULA, Pablo L.	Member
UMALI, Juan L.	Member
YLIZARDE, Honorio L.	Member
MITTENDORF, Hans J.	Adviser

An understanding of marketing practices of poultry and egg producers is needed as a basis for increasing the producers' income and for the formulation of a sound governmental economic assistance program.

Marketing practices vary considerably from area to area and from producer to producer. These differences are due to the basic factors affecting agricultural marketing, such as (1) relative distance between producing and consuming centers; (2) the seasonal production as compared with continuous demand by consumers; and (3) the many services required between the time and place the product is produced and the time, place and type of consumption.

The complex marketing services employed in moving products from the point of production to the ultimate consumers give rise to many problems.

The poultry industry in this country is becoming more and more important. Production has gradually increased. In 1962-63, the number of dressed chickens according to the survey of the Bureau of Agricultural Economics was 25,551,400 birds and in 1964, this jumped up to 32,039,300 birds. With regard to price, it has also increased from an average of ₱4.45 per bird in 1963 to ₱5.35 per bird in 1964. Sandoval, et al, found in 1961 that feed distributors were the favorite market outlet for eggs in Nueva Ecija and Pangasinan and in Camarines Sur nearly two out of three farms sold eggs to retailers. In this study, it was indicated that meat production of poultry was not the major interest of the producers. It was also found that there was a marked absence of classifying grading by size and cleaning or preventing loss of quality of the eggs before they are channeled into the market outlets.

The present investigation was undertaken in Rizal, Nueva Ecija and Manila with the following objectives: (1) to study the marketing practices of poultry producers; (2) to identify the marketing practices of various middlemen; (3) to study the possible relationships between prices paid to producers and middlemen and their marketing practices; and (4) other factors affecting prices at various levels in the marketing channels.

Information in this study was obtained through personal interview. Answers of respondents were recorded in a set of schedules prepared for different respondents at the marketing channel. For lack of material time, the observation included only four (4) big poultry producers, four (4) small producers, five (5) wholesalers and ten (10) retailers of both poultry meat and eggs. The representativeness of the sample is one of the serious limitations of the study. This piece of work is only a result of an exercise required of the participants.

RESULTS AND DISCUSSIONS

Poultry Meat Marketing

Producers

Number of chickens sold. In this study, there were eight (8) poultry producers included. These producers sold young chickens including squab chickens (all cockerels 6-7 weeks old) broilers and fryers and culls from the flock of layers. On the average, 6,937 young chickens per poultry producer per week were sold and culls, only 375. However, the number of young chickens sold ranged from a minimum of 300 chickens to 21,000 heads per week and for culls it ranged from 40 to 500. Percentagewise, young chickens made up 95 per cent of the total number. The average quantity sold per farm is large because three of the raisers included in this study are operators of unusually large commercial poultry and egg farms.

Table 1. **Number of chickens sold by producers per week.**

Class or type	Number of Birds per week per producer		Average	Per Cent of Total
	Minimum	Maximum		
Young chickens	300	21,000	6,937	95
Culls	40	500	375	5
Total			7,312	100

Prices producers received. The poultry meat channeled to the consumers were disposed of by the raisers in two forms; alive and dressed. Most of the commercial farms sold poultry meat as dressed chickens on a weight basis. The average farm price of chickens regardless of class was ₱2.50. The poultry raisers received ₱2.53 per kilo liveweight which was ₱0.01 higher than the price of culls. Producers who sold dressed chickens obtained an average price of ₱3.63 per kilo. The price of dressed young chickens was ₱3.85 per kilo. It should be noted here that one of the commercial farms operates a processing or dressing plant with a capacity of around 1,600 chickens per day.

Table 2. **Prices received by poultry producers**

Class or Type	PRICE/KILO (Pesos)	
	Liveweight	Dressed
Young chickens	2.53	3.85
Culls	2.45	3.20
Average	2.49	3.63

Market outlet of poultry meat. It is important to study the market outlets because in almost all cases the type of buyers affects the prices that the farmers receive for their products. However, in this study, the prices paid by the buyers did not establish a definite pattern. As regards to the relative importance of buyers it was found that the wholesalers (collectors) handled 65 per cent of the total volume sold, and processors, 20 per cent as indicated in Table 3. Supermarkets, groceries, restaurants, hospitals and direct users amount only to 16 per cent. One of these commercial farms used its franchised stores in Manila and suburbs as major market outlet of dressed chickens. These stores are owned by private operators and operate under certain contractual arrangements. However, the poultry farm owner assisted stores in putting marketing facilities.

It was found that farmers tried to adjust their production to the seasonal demand. The demand declined during May and June during school vacation and increased during the months of October to December.

Table 3. **Relative importance of poultry producers' market outlets**

BUYERS	Per Cent of Total
Wholesalers, collectors	64
Processors	20
Supermarkets, groceries, retailers	7
Restaurants, hotels and hospitals	5
Consumers (end-users)	4
Total	100

Wholesalers

Number of chickens sold. The size of business, among other factors, affects the income of the wholesalers. The wholesalers in this study sold 8,150 hens per wholesaler per week, 5,700 of which were young chickens (Table 4). Almost one out of three birds handled by a wholesaler was a cull. The proportion of the culls sold by wholesalers was more than the proportion of culls sold by farmers. This discrepancy can be explained by the fact that the wholesalers included native chickens in their culls. These wholesalers bought a sizable number of native chickens produced in the backyard-poultry farms.

Table 4. Number of chickens sold by wholesalers per week

CLASS	Average number of birds per week	Per Cent of Total
Broilers	5,700	70
Culls	2,450	30
Total	8,150	100

Wholesalers' market outlets. Among the market outlets of the wholesalers, retailers stood out to be the most important with 80 per cent of the business given by them. The remaining percentage was given by restaurants, hotels, hospitals, nightclubs, groceries, supermarkets and direct users. Most of the wholesalers would like to sell to the latter groups of buyers because aside from being not too strict with the quality of hens, they also pay higher prices. The producers usually receive higher prices for poultry sold to direct users because the latter buy only a small number and most often they select the better quality chickens.

Table 5. Relative importance of poultry wholesalers' market outlets

BUYERS	Per Cent of Total
Retailers	80
Restaurants, hotels, hospitals, nightclubs and bakeries	13
Groceries, supermarkets	2
Direct users (end-users)	5
Total	100

Prices paid and received by wholesalers. On the average, the price paid by the wholesalers for the broilers was ₱2.50 per kilo which was ₱0.50 higher than the price of culls. Regardless of the class, the wholesalers paid ₱2.25 per kilo. For broilers, the wholesalers sold dressed chickens at ₱2.70 per kilo. On the average, the wholesaler got a gross return of ₱0.25 per kilo. Based on weight, the culls gave more to the wholesalers than the broilers. Assuming that out of this 25 centavos margin a wholesaler gets 10 centavos, a wholesaler who sells 8,150 chickens a week will earn a gross return of P815.00. A return to the management and labor of the manager can be obtained by deducting from P815.00 shrinkage (10 per cent), losses due to death (5-10 heads per week), market fees (P0.45 per 1 m x 1 m), storage costs (P0.05 per kilo) and slaughter fees (P0.05 per kilo).

Table 6. **Prices paid and received by wholesalers per kilo**

Class or Type	PRICE (Pesos)		Difference (Pesos)
	Paid	Received	(Margin)
Broilers	2.50	2.70	0.20
Culls	2.00	2.30	0.30
Average	2.25	2.50	0.25

Retailers

Number of chickens sold by retailers. There were six (6) retailers included in the study. Their stores are located in the Quinta and Central markets in Manila. On the average, a retailer sold 800 broilers and 270 culls per week (Table 7). Native hens, cockerels and roosters were classified under others. Of the total number of chickens, two-thirds were broilers and more than one-tenth, native chickens.

Table 7. **Number of chickens sold per week by retailers**

CLASS	Average number of birds per week	Per Cent of Total
Broilers	800	66
Culls	270	23
Others*	140	11
Total	1,210	100

* Native hens, cockerels and roosters combined.

Prices paid and received by retailers. The prices paid by the retailers were the prices received by the wholesalers, farmers and others, while the prices received by the retailers were the prices paid by the final consumers. The retailers included in the study bought chickens alive. They paid on the average P2.58 per kilo liveweight of broilers and for culls 28 centavos lower. For native chickens, the retailers paid the lowest price of P2.17 per kilo. For every kilo of liveweight chicken, the retailers received P0.68. For dressed weight, the retailers received P3.63 per kilo regardless of the class. However, for broilers, the average price was P3.75. Retailers sold chickens either dressed or alive. Dressed chickens were sold either by the piece or by the kilo, in so far as selling dressed chickens by the piece is concerned, it would be very difficult for customers to compare prices.

If 50 per cent of the margin between price paid and received is gross income, a retailer will receive P411.00 a week. Of course, expenses such as market fees, wages of helpers and other miscellaneous expenses will be deducted from the above.

Table 8. **Prices paid and received by retailers**

CLASS	PAID (Pesos)	RECEIVED (Pesos)	
	Liveweight	Liveweight	Dressedweight
	Kilo	Kilo	Kilo
Broilers	2.58	3.15	3.75
Culls	2.30	2.90	3.50
Others*	2.17	—	—
Average	2.35	3.03	3.63

* Native hens, cockerels and roosters combined.

Transportation and packing. Chickens were transported by either the producers or the buyers. Vans, jeeps or cargo trucks were either owned by the truckers, producers or buyers.

The cost of transportation was not uniform. It, of course, varied from case to case depending upon the type of transportation used, the distance and the quality loaded.

Live chickens were usually contained in bamboo baskets of varying sizes. The cost of making these baskets ranges from P2.00 to P3.00. These baskets are strong and can withstand rough handling. If used very frequently, they last only for two months. In the case of dressed chickens produced by commercial farms, polyethelene bags and wooden crates were used. A chicken after passing through the dressing plant is weighed and placed in a polyethelene bag with the corresponding weight mark. These packed chickens are placed in wooden crates with ice on top of it.

In this country, the methods of marketing poultry vary from the unorganized to the most organized, from the unsystematic to the most systematic means used in the more developed countries. In commercial farms, operations are vertically integrated. They produce and perform almost all the marketing functions and services necessary in moving the products from the farm to the doorsteps of the consumers. In order to increase its competitiveness, big commercial farms gave credit to their customers up to 30 days and often services while the latter are lacking in small poultry farm.

Conclusion

The study reveals that small farmers are not in a position to compete with the big commercial farms which provide credit, efficient marketing facilities and allowance for loss due to shrinkage. Due to small volume of business, inefficient methods and marketing facilities, lack of capital and know-how, small producers did not obtain competitive price for their poultry meat.

Marketing of Chicken Eggs

Producers

Eggs sold per week. Eggs that were channeled to the market were either sorted or graded by the use of egg grading machine or by hand. In one of the egg farms, a grading, candling and washing machine is being used. In the other farms, sorting by hand is used. Eggs were classified into extra large, large, medium and small. The extra large eggs weigh from 25 ounces and above and the small eggs weigh below 18 ounces. In those egg farms visited, it was found that the production of large and extra large was more than the other classes, the large and extra large averaging 4,633 and 2,336 eggs, respectively. The medium-sized eggs averaged only 1,205 eggs per week. Each farmer sold an average number of 10,087 eggs per week. Of the total eggs sold, more than 50 per cent was large and one-fifth was small. According to the producers, this significantly big number of large eggs is due to the high quality feeds used and that most of the layers were in their prime of production. Small farmers usually produced small eggs because of the quality of the feed. This desire to grade their eggs indicates the farmer's desire to take advantage of the high price of large eggs.

Table 9. Eggs sold per week by class

CLASS	Approximate weight (oz.)	Number per week (doz.)*	Per Cent
Extra-large	25 and above	2,336	15
Large	22 - 24	4,633	51
Medium	18 - 21	1,205	13
Small	Below 18	1,913	21
Total		10,087	100

* Minimum was 300 eggs and maximum was 315,000 eggs.

Prices of eggs received. The egg producers included in this analysis received ₱0.17 for extra-large eggs which is more than ₱2.00 per dozen. Small eggs were only priced at ₱0.135 each. Regardless of the size, the price per egg was ₱0.15. All the egg producers sorted or graded their eggs. They have been doing this service because their buyers were willing to pay a higher price for bigger eggs. In one of the studies in the College of Agriculture, it was found that buyers preferred big and cleaned eggs. It is therefore important to conduct a thorough study on the merchandising of eggs to determine the consumers' preferences and their willingness to pay a premium for every service that is performed to improve the quality of the product.

Table 10. **Prices of eggs received by producers**

CLASS	Price per Egg (Pesos)	Price per Dozen (Pesos)
Extra-large	0.167	2.004
Large	0.152	1.830
Medium	0.147	1.764
Small	0.135	1.620
Average	0.150	1.804

Relative importance of egg buyers. Of the total eggs sold, wholesalers and retailers bought around 60 per cent. One out of four eggs was bought by different institutions such as restaurants, hospitals, canteens and groceries. More than 15 per cent were direct customers such as housewives and bakeries in Manila. Some of the producers supplied also American bases in the Philippines, but this constituted 3 per cent only of the total production. It was learned that buying institutions paid higher prices than the other groups of buyers.

Table 11. Relative importance of egg buyers

BUYERS	Per cent of Total
Wholesalers and retailers	57
Groceries, restaurants, hotels, etc.	22
Direct customers	13
Bakeries	5
American bases	3
Total	100

Number of eggs sold by wholesalers. At the wholesaler level, eggs were only classified into large, medium and small. More than 50 per cent of the eggs sold by wholesalers were medium size. On the average, a wholesaler handled 12,375 dozens per week, 6,188 were medium. The large-sized eggs constituted 50 per cent and the rest were small. The wholesaler bought unassorted eggs. Before selling most of them, they graded, sorted and cleaned, in order to obtain higher prices for bigger eggs. In the course of performing this service, they also sorted the cracked or broken eggs. They received lower prices for broken eggs, about 1 centavo less. There were cases wherein the wholesalers sold those eggs in bottles without shells by weight.

Table 12. Number of eggs handled by wholesalers by class

CLASS	Average number per week (dozen)	Per Cent of Total
Large	4,950	40
Medium	6,188	50
Small	1,238	10
Total	12,376	100

Prices paid and received by wholesalers. The graded eggs had different prices in the market. Large eggs were sold at wholesale price of P17.00 per 100 eggs while the small ones at P14.00 per 100. For eggs which were bought and sold unassorted, the price spread between selling and buying prices was P1.00 per crate (a crate contains 360 eggs). The wholesalers studied preferred to buy unassorted eggs because they get more profit if they are the ones assorting the eggs.

Table 13. Prices paid and received by wholesalers

CLASS	Prices paid (Pesos)	Prices received/egg (Pesos)
Large	—	0.166
Medium	—	0.140
Small	—	0.151
Unassorted	14.50/crate	15.50/crate

Wholesalers market outlets. The most important link between wholesalers and final consumers was the retailers group, who bought nearly two out of three eggs sold in the wholesaler market. Aside from the supply from the producers, the wholesalers supply also about 30 per cent of the total eggs to institutions such as hotels, restaurants, and groceries. Small quantity was also sold to bakeries and final consumers. Most of the wholesalers indicated that the retailers usually pay lower prices. This is understandable because the retailers would like to make profit without changing the form of the product.

Table 14. Relative importance of egg wholesaler market outlets

BUYERS	Per Cent
Retailers	61
Hotel, restaurants, groceries	30
Bakeries	8
Direct consumers	1
Total	100

Number of eggs sold by retailers. In the retail market, retailers sold on the average 318 dozens of eggs per week and the medium and small grades have around 150 dozens each. Percentagewise, large eggs made up more than 50 per cent of the eggs sold in the retail market. The medium and small eggs are equally important to the retailers in terms of number.

Table 15. **Eggs sold per week by retailers by class**

CLASS	Average number per week (dozen)	Per Cent
Large	318	51
Medium	151	25
Small	150	24
Total	619	100

Prices paid and received by retailers. The buyers of eggs in the retail market paid an average price of P14.00 per 100 eggs regardless of the grades. For large eggs, the retailers paid more than 15 centavos per egg. Small eggs were only paid at 12 centavos. The retailers received P15.80 per 100 eggs sold. The price differentials between the buying and selling price of small eggs was the highest. On the average, the retailers received almost 2 centavos per egg on this class.

Table 16. **Prices paid and received by retailers by class**

CLASS	Paid (Pesos)	Received (Pesos)	Differential (Pesos)
Large	0.1508	0.1710	0.0202
Medium	0.1438	0.1570	0.0132
Small	0.1240	0.1460	0.0220
Average	0.1395	0.1580	0.0185

Buyers of eggs in the retail market. The retailers included were those selling eggs in the Quinta and Central markets. As expected, the retailers sold more than 80 per cent of eggs handled to final consumers. There were also retailers who regularly supplied restaurants and hotels. They stated they could not supply more to this group of buyers because they (retailers) could not compete with other suppliers such as producers and wholesalers. It was noted that the eggs sold in the public market were not contained in cartoon boxes. It was also observed that the number bought at the retail level ranged from 6 to 10 eggs.

Table 17. **Relative importance of retailer market outlets**

BUYERS	Per Cent of Total
Direct consumers and users	83
Restaurants and canteens	15
Other retailers*	2
Total	100

* Bought eggs for sale and for consumption

Conclusion

It can be concluded that small producers did not take advantage of the benefit of grading. Most of the eggs received by the wholesalers from the small producers were not graded and cleaned. On the other hand, commercial egg producers graded the eggs they produced and they benefited from higher prices of big eggs.

RECOMMENDATIONS

1. In order to be able to compete with big commercial poultry farms, it is highly recommended that the small producers should form themselves into a producer and cooperative marketing association. At the producer level, it is imperative that they should group themselves so that this association can provide the quality production requisites at reasonable prices. Since small producers are technically incompetent to undertake this project, it is advisable that they be provided with quality chicks, feeds and drugs together with technical advice to be given by extension technicians to be employed by the cooperative. In order to assure the cooperatives of the volume of business necessary for economic operations, the extension technician who is the link between the cooperative and their members should see to it that the latter comply with the marketing agreements. Membership to this organization should be properly and carefully screened based on certain criteria.

2. The possibility of exporting eggs and chickens either for table or for breeding purposes should be explored at all angles. We have the information that Hongkong needs some 20 million pounds of broilers and a sizable amount of table eggs yearly. These products are now being procured from the United States and Australia. This is indeed a potential market for the local poultry industry. The exportation of eggs and chickens may initially affect local supply but in the long run it will be found to be the only remedy that will bolster production of eggs and chickens in this country. The poultry farmers will no doubt benefit from this policy as they will be assured more or less of a better market for their produce. Besides, this will be a source of foreign exchange which the economy surely needs.

3. It was observed that death of chickens in transit was caused by the poor containers coupled with faulty and rough handling. In order to minimize losses, bamboo baskets should be improved by making baskets with small holes especially at the lower side.

4. Since buyers were found to be buying eggs from 6 to 12 pieces, it is highly suggested that eggs be placed in cartoon boxes of 12 if cost of the latter is reasonable. This will not only increase sales but will also save time of the seller as well as the buyers.

5. Establishment of a wholesale and terminal market with complete storage facilities is recommended so that farmers may avail of such marketing facilities and be able to obtain higher prices for their poultry.

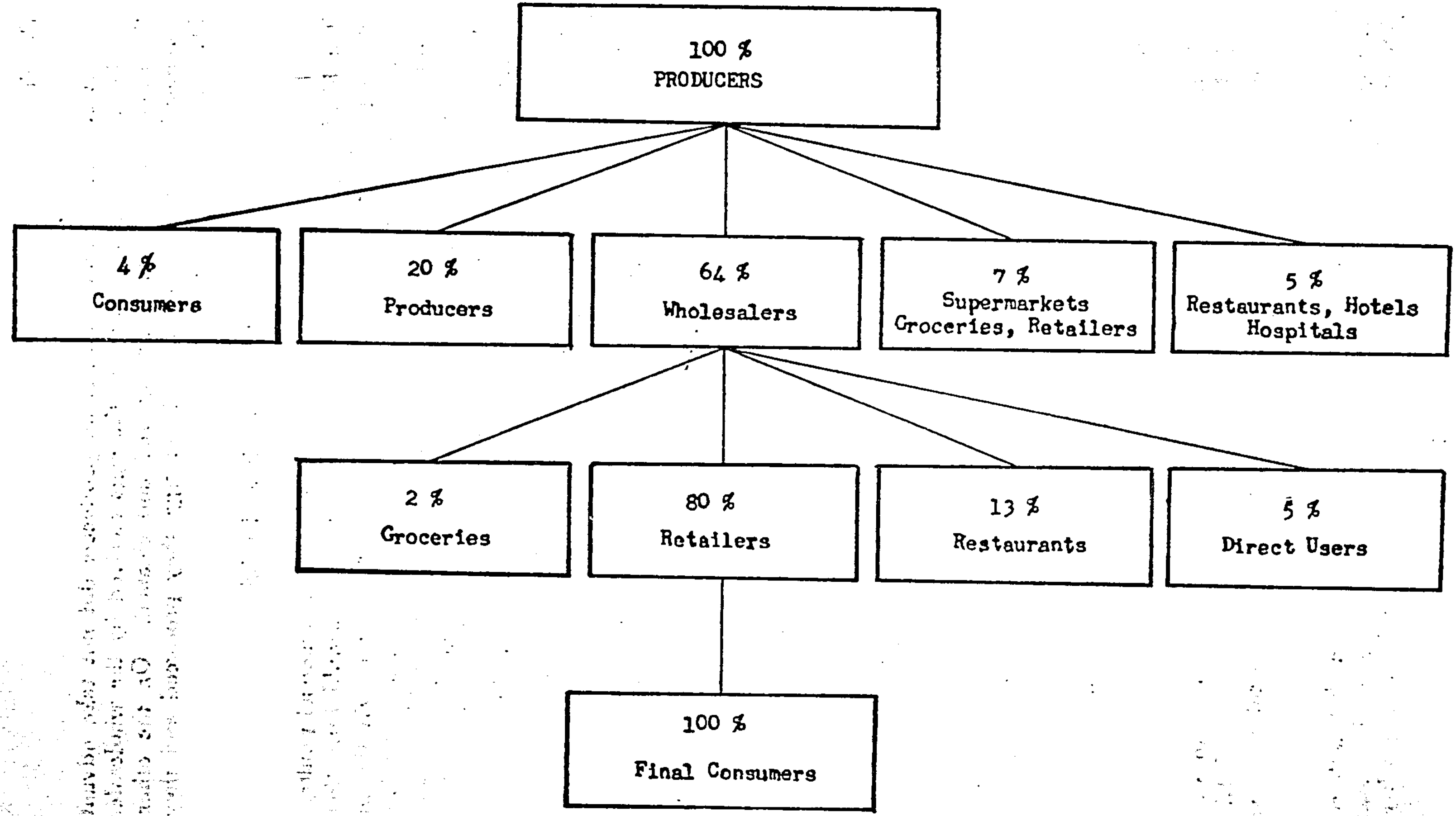

FIGURE 1. Poultry Meat Marketing Channel

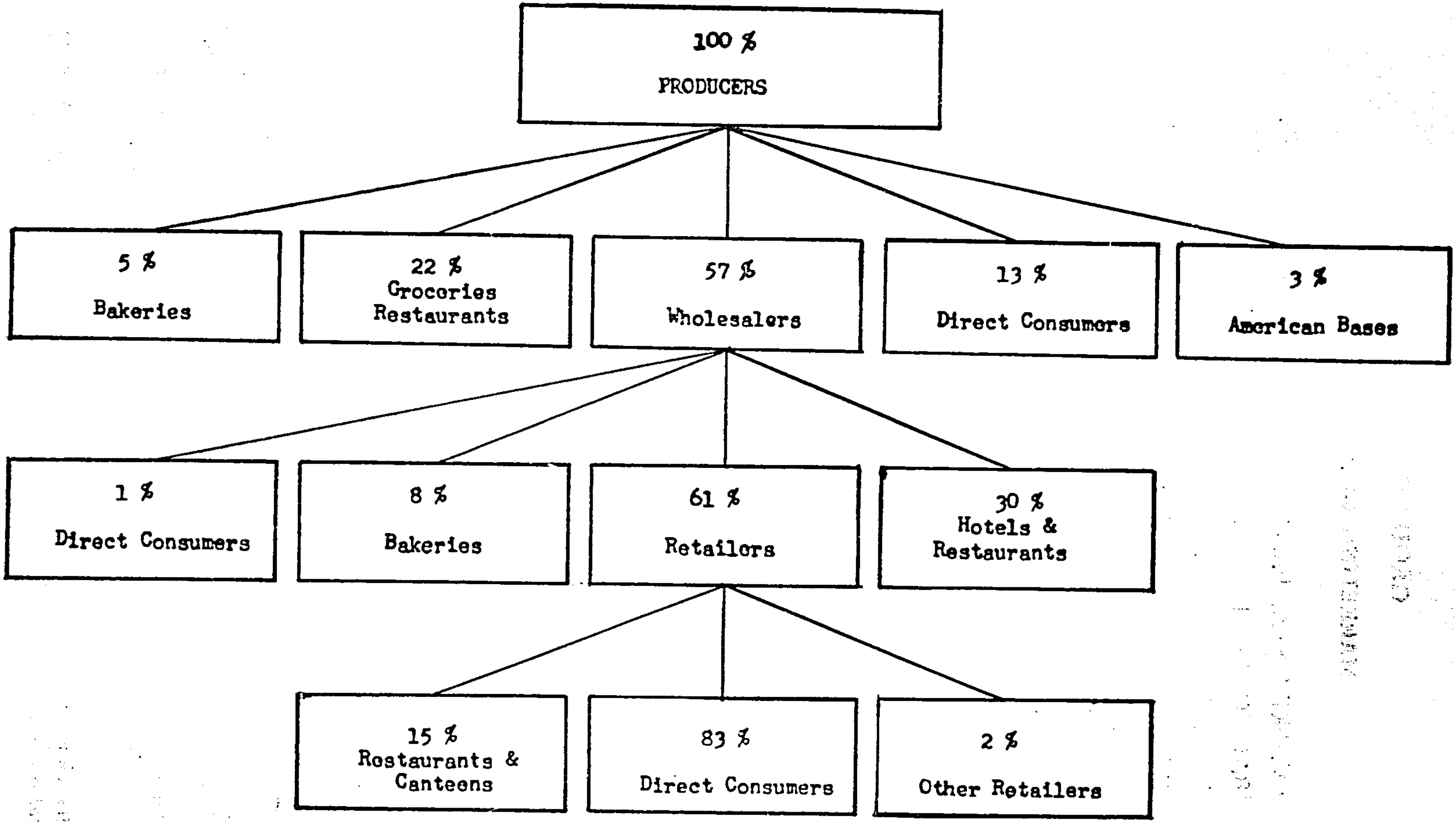

FIGURE 2. Egg Marketing Channel

GROUP C – REPORT

MARKETING OF PALAY AND RICE

EVANGELISTA, Presciliano D.	Group Leader
BACLIG, Jose B.	Member
ENRILE, Felix D.	Member
GACUSAN, Epifanio C.	Member
GUZMAN, Lucio S.	Member
MONTENEGRO, Amelita R.	Member
TALON, Agripino M.	Member
SHAH, F. A.	Adviser

Organization of the Survey Group

Upon sizing up the extent of the coverage of the study of the palay and rice marketing for the allotted time, a working set-up was agreed upon which resulted in the creation of three action teams, with a leader each coordinated by the Group Leader who is also included in one of the action teams.

Action Teams: a. Producer and Cooperatives (3)
b. Traders and Millers (2)
c. Wholesaler and Retailer (2)
Resource person: FAO-UN Marketing Specialist

Survey Operations

Places where palay and rice are traded were picked out as survey area which included Nueva Ecija, Bulacan and Manila. Two cases were enumerated in Isabela by a member of the producer and cooperative action team who went to the place which enlarged our coverage.

The survey group proceeded to Nueva Ecija covering two municipalities on the first day; to Bulacan covering two municipalities on the second day; to greater Manila covering RCA and CCE operations on the third day and public markets and private wholesale establishments on the fourth day.

The group split into action team units when it arrived at places to gather the information called for in the survey schedule previously prepared.

Interviews were made in the place of business of the interviewees. Observations on the practice of trading were also noted at the places visited.

PRODUCERS

Introduction

Nineteen palay producers were surveyed: 12 from Nueva Ecija; 2 from Isabela; 4 from Bulacan and 1 from Pampanga. Of these producers, 13 are members of Farmers Cooperatives and 6 are non-members.

Production

Out of the 19 producers surveyed, 2 harvested 50 cavans of palay, 2 harvested 51 to 100 cavans and 15 produced 100 cavans and over.

Hectarage and Production Yield

For the crop year 1963-1964, all the 19 producers surveyed planted 442 hectares to palay with a total yield of 15,959 cavans or an average production of 36.08 cavans per hectare. For the 1964-1965 crop year, the same producers planted 444 hectares with a total yield of 15,660 cavans or an average of 35.25 cavans per hectare.

Storage Facilities

The producers surveyed own 15 units of storage facilities with a total capacity of 7,135 cavans palay. Of these, 9 units are of 50 cavans or less capacity, 3 units of 51 to 100 cavans capacity and 3 units of 500 cavans or more. Four producers did not own any storage facilities.

Percentage of Crop Stored After Harvesting

1. Own farm, barn or granary	28.5%
2. Other storage facilities not owned by farmers	41.9%
3. Sold or disposed off right on the threshing floor	29.6%

Length of Storage Before Crop is Sold for Cash

1. Less than 2 months	7 producers
2. 2-4 months	9 producers
3. Above 4 months	9 producers

It was observed that 9 were able to keep their palay longer than four months giving them the chance to wait for a better price; 3 for less than four months but more than two months and 7 for less than two months or immediate disposal.

Percentage Disposition of Crops

Table 1. Percentage disposition of crops

Kind	Per Cent
To FACOMA	32.6
To local traders	14.0
Kept for domestic use	10.5
Reserved for seeds	5.6
Given to landlord in payment of loans	1.6
Paid to harvesters or farm labor	3.1
Deposited for future sale	32.6
Total	100.0

Prevailing Average Price of Palay

The prevailing prices fluctuate within the following ranges for the three groupings used by the traders. Their difference is about one peso while in palay form.

1. Fancy	P16.50 to P18.50
2. Special	P15.50 to P17.50
3. Ordinary	P14.40 to P15.50

Factors Considered by the Buyer in Determining the Quality of Producer's Palay

1. Degree of moisture content
2. Percentage of chaff or foreign matter
3. Machine threshed or animal threshed

If the palay offered for sale does not meet the ideal condition satisfactory to the buyer, a reduction in price from P1.00 to P2.00 per cavan is applied by the buyer. This is governed by practice and accepted by the seller and if given for deposit only, an allowance of from 1 to 5 kilos excess over the standard weight for newly harvested palay is asked from the depositor.

Palay Brought to Market Were All Packed in Jute Sacks

Jute sacks used are purchased from P1.20 to P1.40 per piece for brand new and P0.70 to P1.00 per piece for good second hand.

Transportation of Produce from Farm to Market

1. Distance of Producers	To FACOMA	To Public Market
Less than 5 kms.	8	6
5-10 kms.	7	7
Above 10 kms.	4	4

Majority of the farmers are within a radius of ten kilometers to their market or depository warehouses. Most use motor vehicles in transporting their stock at a cost ranging from twenty centavos to forty centavos per cavan.

2. Transportation costs from the farm to the market

P0.20 per cavan	—	3 farmers
P0.21 to P 0.40	—	10 farmers
Above P0.40 per cavan	—	6 farmers

Sources of Credit

Table 2 shows that 11 farmers acquired loan from FACOMA, 3 from traders, 1 from the bank and 2 from other sources. It is interesting to note that all acquired loans are used for farm operational expenses, fertilizer and for subsistence. Three acquired facilities out of the loan.

Table 2. Sources of credit

Sources of Loan	Amount	Average	Cases (19)
FACOMA	P150-3,000	P920	11
Traders	110-370	190	3
Bank	15,000		1
Others	150-250	200	2

Purpose of Credit

1. Farm expenses	—	10 farmers
2. Fertilizers	—	3 farmers
3. Subsistence	—	3 farmers
4. Farm implements and animals	—	3 farmers

In all cases in credit extension, the sale of palay by the producers was a condition in the extension of credit.

Manner of Payment Delivered for Sale

1. Advance payment	—	3 farmers
2. Partial payment and balance after a certain period	—	1 farmer
3. Cash on delivery (C.O.D.)	—	15 farmers

Most farmers were paid for their produce delivered to the buyers. Only 3 got advance payment; 1 got partial payment and collected the balance after a lapse of time.

Present Difficulties Met by Producers

The farmers interviewed enumerated the following as their problems:

1. High cost of production
2. Usury
3. Poor irrigation system
4. Low price liquidation of farm produce
5. Lack of subsidized fertilizers

The suggestions made by the producers are:

1. Higher government support price for palay
2. Availability of subsidized fertilizers
3. Better irrigation facilities
4. Better financing facilities
5. More demonstration farms and better extension service.

FARMERS' COOPERATIVE MARKETING ASSOCIATION (FACOMA)

Introduction

Three Farmers' Cooperative Marketing Associations (FACOMA) were covered in the survey conducted for 3 days in Isabela and Nueva Ecija. These are reputed to be among the principal palay producing provinces in the Philippines.

The FACOMAS included were:

Place	Name of Manager	Remuneration
Isabela		
a. Echague FACOMA	Lucio A. Guzman Jr.	Salary & Commission
b. Alicia FACOMA	Leonardo Tomas	Salary
Nueva Ecija		
c. Cabanatuan City FACOMA	Leonila Chavez	Salary & Commission

Membership of FACOMAS Covered:

Cabanatuan City FACOMA has almost 50 per cent of its original members active followed by Echague FACOMA with almost one third of its members active and Alicia FACOMA having 2 per cent of its members active (Table 3).

The two bigger FACOMAS give their manager a monthly salary plus commission on the over-all net savings after the end of the year.

FACOMA as an institution in the Philippines has undergone a crisis period but is on its way to regain the farmers' respect and confidence.

Table 3. Membership of FACOMAS by province covered

Province	No.	Membership			Area Cultivated by Member (has.)
		Active	Inactive	Total	
Isabela	2	423	2,146	2,579	15,674
Nueva Ecija	1	2,560	1,189	3,749	4,700
Total	3	2,983	3,335	6,328	20,374

Sources of Capital

Loans from the Agricultural Credit Administration is the biggest source of capital of the FACOMAS, followed by the loans from private sources

(Table 4). Savings from previous years' operations or profit of the association is the third biggest source of capital and the smallest source is their initial subscription, in the form of stock owned when they applied for membership.

This shows that about P1,000,000.00 or 80 per cent is the borrowed capital whereas a little over P200,000.00 or 20 per cent represents savings and cash investments of members.

Table 4. **Amount of capital by source and FACOMAS covered**

Name of FACOMA	Total Capital	Contribution of Members	FACOMA Savings	Loans From	
				A C A	Others
Echague	P 671,885.00	P25,640.00	P 71,210.00	P435,035.00	P140,000.00
Alicia	35,000.00	5,000.00	—	20,000.00	10,000.00
Cabanatuan	455,744.00	36,195.00	68,702.00	329,827.00	21,020.00
Total	P1,162,629.00	P66,835.00	P139,912.00	P784,862.00	P171,020.00

Production of Farmer-Members and Their Pledge

Farmer-members of the three FACOMAS produce half a million cavans of palay and pledge to their associations about 60 per cent or 350,000 cavans of which 159,000 or 45 per cent of the pledge is delivered or marketed through their FACOMAS (Table 5.) Among the FACOMAS covered, Cabanatuan City FACOMA has the highest percentage of delivery with about 63 per cent followed by Echague FACOMA with about 60 per cent delivery.

Among FACOMA members, their association is still their principal outlet of their produce.

Table 5. **Production and pledge by FACOMAS covered**

Name of FACOMA	Members Produce	Marketing Agreement	
		Pledged	Delivered
Echague FACOMA	185,220	128,460	74,000
Alicia FACOMA	190,000	90,000	3,000
Cabanatuan City FACOMA	151,440	131,440	82,000
Total	526,660	349,900	159,000

Volume of Business for 12 Months Operation

The total volume handled by the FACOMAS covered amounted to 159,000 cavans or P2,468,000 worth using the ordinary variety (majority of stock) price as the conversion factor. This volume shows the capability of a properly managed FACOMA to serve its members (Table 6).

Table 6. Volume of business by FACOMAS covered

NAME OF FACOMA	VOLUME OF BUSINESS		WAREHOUSE	
	In Cavans	Value in Pesos	Capacity	Utilization Percent
Echague FACOMA	74,000	1,073,000	50,000	25
Alicia FACOMA	3,000	45,900	40,000	Empty
Cabanatuan City FACOMA	82,000	1,353,000	120,000	40
Total	159,000	2,471,900	210,000	65

Prices Offered by FACOMA and Local Traders

Prices offered by the FACOMA and local traders in Cabanatuan City are higher than those in Isabela in all groups with Fancy having the biggest difference of almost ₱4.00 per cavan (Table 7). Fancy group raised in Isabela commands lower price than that in Central Luzon in the retail market because of its poor cooking and eating quality. Private commercial traders in Alicia, Isabela offer ₱0.10 higher per cavan over that of the local FACOMA for all varieties. This difference is bigger in the case of the Cabanatuan City FACOMA which is ₱0.70 higher for Ordinario, ₱0.50 for Special and ₱1.30 for Fancy. In the case of Echague, Isabela, however, the private traders offer ₱0.10 lower than those offered by the local FACOMA. This can be explained by the bigger operating funds of the Echague FACOMA as could be seen in Item No. 3 (Source of Capital).

Table 7. Price per cavan of palay by variety and FACOMAS covered

Kind of Buyer	Price Per Cavan of 45 kilos Palay					
	Ordinario		Special		Fancy	
	FACOMA	Trader	FACOMA	Trader	FACOMA	Trader
Echague FACOMA	₱14.50	₱14.40	₱16.50	₱16.40	₱17.50	₱17.50
Alicia FACOMA	14.30	14.40	16.30	16.40	16.30	16.40
Cabanatuan City FACOMA	16.30	17.00	17.50	18.00	19.00	20.30

Grading and Classification

Grouping as to Fancy, Special and Ordinario variety is done by the FACOMA and now adopted by RCA and private traders in general. In practice, reduction in price ranging from ₱0.50 to ₱0.60 per cavan is applied to substandard palay which contains more moisture or not very clean stock by both private traders and FACOMA.

Handling and Packaging

Handling cost ranges from ₱0.05 to ₱0.10 and storage fee of ₱0.20 to ₱0.30 per cavan of palay in FACOMAS.

Palay stock marketed through the FACOMAS are all packaged in jute sacks either brand new or second hand. Cabanatuan used 65,000 brand new sacks, 10,000 second hand while Alicia used 3,000 second hand sacks.

Payment of Stocks Procured from Farmers

More than one half of the members ask for advance payment in the form of commodity loan and a little over than one third are paid cash on delivery of stock and the remaining 10 per cent deposit their palay, get a little advance and ask for full payment from 2 to 4 months, thereafter Table 8. By then prices have increased considerably.

Table 8. Payment of stocks procured by FACOMAS covered

Name of FACOMA	Cash on Delivery of Stock	Paid in Advance Commodity Loan	Deposit with Payment on Demand
	(%)	(%)	(%)
Echague FACOMA	40	50	10
Alicia FACOMA	25	60	15
Cabanatuan City FACOMA	35	55	10

Recommendations

1. For the FACOMAS to be able to procure the pledged stock of the farmers, the FACOMAS should be provided with more loan for capital on lower interest rate and shorter time of waiting for the release of such loan.

2. Efforts should be exerted to revitalize all the FACOMAS to enable them to serve their members, assist in drafting the services of competent managers and responsible officers who will run the affairs of the FACOMA and perform periodic audit on management efficiency, personnel administration, and fund utilization. The services rendered to members should be undertaken free by an independent body responsible to the government.

3. Cooperatives as a subject should be included in the educational curriculum to imbue the in-school youth early with the importance of cooperatives.

PALAY RICE TRADERS/MILLERS

Introduction

The survey was conducted in Nueva Ecija, Bulacan and Manila. Information on the trading and milling operations of the millers/traders were obtained for the period July 1964 to June 1965. The following five palay and rice traders/millers were interviewed:

1. Diego Rice Mill, Gapan, Nueva Ecija
2. Mabuhay Rice Mill, Nueva Ecija
3. Joson Rice Mill, San Miguel, Bulacan
4. Magdalena Santos Rice Mill, Pulilan, Bulacan
5. Central Cooperative Exchange, Inc., Mandaluyong, Rizal

Of the five traders/millers, three were also producers/owners of rice lands; two were engaged in real estate business; and one, engaged in banking.

The Central Cooperative Exchange, Inc. dealt in rice and tobacco trading aside from activities involving procurement and distribution of agricultural supplies and farm equipment for FACOMA members.

Facilities

1. **Warehouse.** All traders/millers interviewed have warehouses with storage capacity of from 20,000 to 300,000 cavans.[1]

2. **Transport.** All traders/millers interviewed reported having a total of 16 freight trucks. The hauling capacity of each truck ranges from 150 to 215 cavans of palay.

3. **Rice mills.** Each of the trader/miller has a rice mill. The output capacity of each rice mill ranges from 130 to 320 cavans of rice per 12 hours of operation.

The CCE, Inc. has a rice polisher and a rice mixer capable of polishing 220 cavans and mixing 300 cavans of rice, respectively, per 12 hours of operation.

Quantity of Palay/Rice Handled

1. **Procurement.** Traders/millers interviewed procure their stocks directly from producers and/or from middlemen. Producers usually bring their produce to the establishments of the traders/millers. Procurement from middlemen is made by the traders/millers themselves through the use of their own trucking facilities.

2. **Manner of payment of purchased palay.** The purchase price was always based on the current market price in the locality at the time of delivery.

Of the total amount of ₱58,250 loaned by traders/millers to producers and merchant-middlemen, only ₱11,900 or approximately 20 per cent remained uncollected during the period.

Disposal

Procured stocks were often processed (milled) and marketed in the form of rice. However, due to exigency for need of cash, palay stocks were also sold in raw form.

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[1] One cavan of palay weights 45 kilograms
One cavan of rice weighs 56 kilograms

It was noted that of the total quantity of palay disposed of, 99 per cent was sold right at the traders/millers' establishments and only 1 per cent was brought by them to marketing centers.

In the case of rice, 13.6 per cent was sold right at the establishments of the traders/millers while 86.4 per cent were brought to the marketing centers.

Stocks of palay remained in storage from 3 to 6 months before they were milled and disposed of.

Problems of Traders/Millers Interviewed

1. The government procurement price of P12.50 per cavan of palay of 45 kilos (clean and dry) is no longer realistic. The price prevailing in localities visited has gone up to as high as P14.00 to P18.00 per cavan depending upon the variety and class.
2. The government price stabilizing institution has imported rice which is being sold at P1.30 per ganta, resulting in the slow movement of stocks procured by local traders at a relatively higher price.
3. Such situation hampers the continuous operation of the milling facilities of the trader/miller, resulting in the delinquency in the payment of their obligations with banking institutions and the RICOB.

Suggestions of Traders/Millers Interviewed

If the government must continue importing rice and selling it at break-even or subsidized price, the government should also help the trader/miller by extending, at least, the following facilities:

1. Make them procurement agents on commission basis
2. Engage the services of their:
    a. Warehouses
    b. Rice mills
    c. Trucking facilities

WHOLESALER AND RETAILER

Introduction

Five wholesalers and 7 retailers in the provinces of Nueva Ecija and Bulacan and at Manila were interviewed, distributed as follows:

Places	Wholesaler	Retailer
Nueva Ecija	2	2
Bulacan	—	4
Manila	3	1
Total	5	7

The former included those who own storage facilities and sell in bulk or by cavans to others who resell them to consumers, whereas the latter included those who keep a store space and sell directly to consumers.

Facilities

All the wholesalers have storage facilities with a capacity ranging

from 300 to 10,000 cavans; three have rice mills; two with trucks for delivery; all have weighing equipment while all retailers have a store space and small storage space enough for one week supply. In addition, they have open top boxes measuring devices comprising of gantas, liters and a piece of flat wood used in levelling the heap of rice in a ganta or liter.

Sources of Capital

Among the wholesalers, three used their own personal funds as capital, two used their own plus loan from the bank.

The retailers were more shy in going to the bank for loan as only two availed themselves of bank loans and five used their own personal funds as capital. The Philippine National Cooperative Bank is the source of loan of the retailers.

Source of Stock and Transport

Wholesalers who operate rice mills get their palay stock from farmers or producers whereas those without rice mills depended upon traders or warehousemen. Retailers solely depended upon traders or wholesalers in the town or city for their daily or weekly supplies. All retailers do not have delivery trucks. Two of the five wholesalers have trucks.

Payment and Replenishment

Payment by wholesalers for their stock is all in cash on delivery basis to supplier farmers. Two of the seven retailers get their supply on partial payment and consignment while the five pay cash to the wholesalers or traders for every delivery ranging from daily to weekly.

Quality, Grade and Class

In general, rice reaches the wholesalers and retailers already classified on the basis of milling and cooking quality. Because of the existence of numerous varieties, the trade has adopted the following connotations for quality grade and class:

Fancy—for the best cooking quality, thoroughly milled and polished, dry and clean. This includes among others Milagrosa, Wagwag, Konsehala, Binuhangin, etc.

Special—for the next lower group, very good cooking quality, dry and clean and consumers preference thoroughly milled which includes among others, Raminad, B-3, Benser, Intan, Seraup Kechil, etc.

Ordinario—for the lowest group, good or fair cooking quality, regular milling, not thoroughly polished, dry and clean which includes Binato, Macan, Tjeremas, Thailand, Burma and Peta.

The millers and wholesalers do the classification which is carried on through the retail stores.

Distribution and Prices

All wholesalers bring their stock to the retailers. Prices fluctuate frequently and the wholesalers fix the price on the basis of 55 kilos per cavan. The retailers, on the other hand, fix the price on the basis of a ganta. Retail price per ganta is slightly lower in the provinces than in Manila although wholesale price is almost the same - the difference represents the fair allowance for transportation cost.

The per cavan difference as per figure given by wholesaler and retailer represents the gain the retailer wants for his services. The per ganta quotation is obtained by dividing the per cavan price by the number of gantas expected per cavan.

The range in prices within the group covers the minor difference of the varieties belonging to the group. The price per ganta in the provinces is less by about P0.05 than those prevailing in the city.

There is more sale for the ordinario group than the special and fancy put together, both in the provinces and in Manila.

Table 9. **Current prices**

CLASS	As supplied by wholesaler/cavan	As supplied by retailer	
		Per Cavan	Per Ganta
Fancy	P39.00 - P41.50	P41.50	P1.80
Special	35.00 - 37.00	37.50	1.60
Ordinario	30.00 - 32.50	34.50	1.40

Problems in Distribution

On the problems encountered in grain marketing, four of the five wholesalers interviewed claimed lack of capital; two mentioned competition with other businessmen specifying RCA; and one mentioned poor bags or packaging.

Four wholesalers favored the change in the unit of measure in retailing from gantas to kilo basis as is done in sugar and many vegetables nowadays. Only one wanted to retain the ganta system.

Among the seven retailers, six pointed out that lack of capital is a major problem; six also wanted to change gantas into kilos in retailing while five stated that competition by RCA affected their business.

GENERAL RECOMMENDATION

Financing

A cheap and easy source of credit on financing farmers marketing cooperatives, traders and retailers of palay, corn and rice producers, millers exclusive for the industry may be the establishment of bank similar to that of the Veterans Bank for veterans, the NACIDA Bank for cottage industry operators and the Retailers Loan Fund for general merchandise retailers.

The bank can cater exclusively to the needs of the rice industry in production, storage, processing, transportation, and marketing both on the wholesale and retail levels. The bank should suit its rules and regulations to the needs of the palay producers and businessmen perhaps more liberal in the collateral requirement, higher loan value of collateral offered, say a

₱1,000 minimum for a hectare of palay and/or corn offered as security, lower rate of interest and for the bank to have higher rediscounting rate with Central Bank.

These will minimize the chances of palay and rice businessmen to fall victims of the usurers and the payment of interests to money lenders or to other sources of capital thus reducing the costs of production and marketing and reducing finally the price of rice and/or corn to consumers.

Extension and Market Information Service

1. Fertilizers, chemicals, good seeds and farm implements used in palay production should be made available at low cost to farmers. The producers should be assisted in determining their needs on the farm by government and/or competent specialists both in production and marketing fields.

2. There should be an efficient market information service to assist the producer, trader and consumer in their respective activities.

Irrigation Facilities

The government should put actual and concerted effort in building irrigation facilities in palay raising regions to enable the greater number of farmers to plant twice a year, grow palay without fear of drought or lack of water.

Marketing

1. Minimum support price for palay and consumers support price for rice should be announced at least six months before the effectivity of the support price programs to be determined by a palay, rice and corn regulatory marketing board who determines and fixes such prices up-dated monthly based on popular varieties found in the market.

2. Standards of commercial varieties of palay and rice should be established to guide businessmen and farmers.

3. To simplify the unit of measure in the trading or marketing of palay and rice, the use of weight or metric system should be adopted from the producer down to the retailer and consumer. The ganta or quantity unit of measure be made obsolete. This will assure the buyer of the right amount he paid for.

4. Cheaper packaging materials than jute materials should be found to reduce the cost of marketing. Some experiments must be done to discover the economy of the use of paper bags, plastic bags, cloth bags, abaca bags, straw, bulk handling and storage.

Processing

The Kiskisan type of rice huller or rice mill should be improved to increase its milling recovery or efficiency to at least 52 per cent by volume or 65 per cent by weight to save the country from the loss in milling amounting to ₱72,500,000.00 annually.

Survey of Rice Industry with FAO Assistance

There should be a comprehensive survey of palay industry including production, processing, transporting, storage, marketing, wholesale and retail in order to evolve an over-all program of agricultural development. Assistance in this field may be sought from the Food and Agriculture Organization of the United Nations and other government or private institutions that may be interested in solving this problem.

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APPENDIX A
Collection Arrangement (Paddy/Rice)

ITEMS	TRADERS/MILLERS					Total and/or average
	Diego Rice Mill	Mabuhay Rice Mill	Joson Rice Mill	Magdalena Santos Rice Mill	CCE, Inc.	
(1) Quantity brought to traders warehouse by producers	40,000	56,650	38,500	150,000	300,000[1]	281,150 300,000[1]
(2) Average price of palay/cavan	₱16.00 - ₱16.50	₱16.00 - ₱16.50	₱16.00 - ₱16.50	₱16.00 - ₱16.50	—	₱16.00
(3) Quantity purchased (palay) using his own or hired transport	40,000	—	16,500	50,000	—	106,500
(4) Average price per cavan (palay)	₱15.00 - ₱16.00	—	₱15.70 - ₱16.20	₱16.00	—	₱16.00
(5) How prices arrived at	prevailing price	prevailing price	prevailing price	prevailing price	—	—
(6) Estimated expenses in the purchase of palay/cavan	₱0.40	₱0.35	₱0.40	₱0.65	—	₱0.40
(7) Capacity of warehouse (palay)	20,000	30,000	100,000	200,000	300,000	650,000
(8) No. of transport facilities	2	1	4	2	7	16
(9) Total capacity of transport (palay)	350	150	545	430	500[1]	125
(10) Capacity output of rice mill (rice) per 12 hours operation	225	130	200	320	220[2] 700[3]	220

1 — rice in cavans
2 — rice polisher
3 — rice mixer

APPENDIX B
Disposal of Palay/Rice

ITEMS	TRADERS/MILLERS					Total and/or average
	Diego Rice Mill	Mabuhay Rice Mill	Joson Rice Mill	Magdalena Santos Rice Mill	CCE, Inc.	
Quantity sold in palay form	1,000	—	1,000	140,000	—	142,000
Average price of palay sold/cavan	₱14.00	—	₱17.00	₱17.00	—	₱17.00
Channels of outlet of palay	wholesalers	do	do	do	—	—
Quantity of palay milled into rice	79,000	52,650	54,000	60,000	—	245,650
Average price per cavan of 56 kilograms (rice)	₱34.00 - ₱34.50	₱34.00 - ₱35.00	₱30.00 - ₱32.00	₱32.00	₱34.50 - ₱35.80	₱34.00
Channels of outlet of rice	wholesalers and retailers	do	do	do	govt. entities	do
Quantity of palay brought by traders to marketing centers	500	—	1,000	—	—	1,500
Average price for palay/cavan brought to market	₱14.60	—	₱17.00 - ₱17.20	—	—	₱17.00
Quantity of rice brought by traders to marketing centers	29,200	27,900	27.975	15,925	298,000	409,000
Average price for rice/cavan	₱34.00 - ₱34.50	₱34.00 - ₱35.00	₱30.00 - ₱32.00	₱32.00	₱34.50 - ₱35.80	₱34.00
Quantity of palay sold in traders establishment	500	—	—	140,000	—	140,500
Average price for palay/cavan	₱14.00	—	—	₱17.00	—	₱17.00
Quantity of rice sold in traders establishment	—	—	1,400	16,075	2,000	19,475
Average price for rice/cavan at traders establishment	—	—	₱29.50 - ₱31.50	₱32.50	₱34.50 - ₱35.80	₱32.50
Length of storage of palay (mos.)	6	3	3-1/2	5	1/2[1]	3-6

[1] — Rice

APPENDIX C

General Information on RCA, CCE and FACOMA Organizations, Their Operations and Functions

Rice and Corn Administration

The survey group for paddy and rice had an occasion of meeting some officials of the Rice and Corn Administration (RCA) in its central office located at Mendoza St., Quiapo, Manila and in one of its branches located at Cabanatuan City. The survey group learned that the RCA, under its charter, provides incentives for production in the form of price support of not less than P11.50 or more than P12.50 per cavan of 45 kilos clean and dry palay F.O.B. nearest RCA center. The current price prevailing in the open market of ordinary palay ranges from P14.00 to P15.00 per cavan. This situation explains the inability of the RCA to purchase a substantial amount of the farmers' produce for the current year at the authorized support price of not more than P12.50 per cavan. Nevertheless, the existence of such price support and RCA's readiness to purchase the farmers' produce has contributed to a great extent the necessary safeguard against the exploitation of the small farmers interest by speculators and monopolistic tendencies of some traders.

For the benefit of the low-income consumers the RCA through some 15,000 retailers scattered all over the country is presently selling low priced rice at P1.30 per ganta to the public. By operation of government subsidy, it can be said that the stabilization of palay and rice prices for the benefit of both the producers and consumers of the country, of which the RCA has been charge to undertake is being pursued.

The Central Cooperative Exchange, Incorporated

The survey group also had an occasion of having a meeting with the General Manager of the Central Cooperative Exchange, Inc. (CCE) in Mandaluyong, Rizal. The General Manager stated that the agency has currently 430 member agricultural cooperative organizations.

1. Capitalization

CCE's authorized capital is P1 million divided into 10,000 shares with a par value of P100 each. Its entire authorized capital has been fully subscribed of which P985,700 is paid up. At present, the ACA holds merely 41.29 per cent of the capital stock of the association as against its original shareholdings of 99 per cent. Majority of the shares of capital stock, or 58.71 per cent is now held by FACOMA members.

2. Membership

FACOMA membership is divided into seven regions, as follows:

Region I (Ilocos Province) .... 110 members

Region II (Cagayan Valley)	42 members
Region III (Central Luzon)	85 members
Region IV (Southern Luzon)	59 members
Region V (Eastern Visayas)	32 members
Region VI (Western Visayas)	50 members
Region VII (Mindanao)	52 members

The collective farmer-membership of the foregoing FACOMA is around 250,000 farmers.

2. Marketing and Warehousing Services

The services CCE renders as the national marketing and supply federation of agricultural cooperatives are all geared to cope with the requirements and needs of the FACOMA members. The CCE aims to promote and facilitate the efficient marketing of excess produce of FACOMA members particularly rice and corn, and procure from local or foreign sources for distribution to qualified members, fertilizers, jute sacks, planting materials and other equipment and supplies needed for agricultural production.

The CCE operates a number of warehouses in:

(1) Meycauayan, Bulacan,
(2) Pureza, Santa Mesa, Manila, and
(3) Agoo, La Union.

These warehouses are used for storing rice, fertilizer, tobacco and other agricultural commodities.

The Farmers Cooperative Marketing Association (FACOMA)

The FACOMA is a voluntary business organization of and among farmers, organized under Act 3425, the Cooperative Marketing Law. As a multi-purpose cooperative association, a FACOMA is primarily established to market farm products and buy farm supplies and equipment for the members' direct benefit. It is composed of a minimum of 200 farmers, each one owning at least a share stock. Some ACA loans like facility and commodity loans are channeled to the FACOMA, while production loan and farm improvement loan are given directly to farmers.

FACOMA also provides a practical and effective channel through which various aids or services are brought down to the farmers and the rural communities. Through them, extension of technical services in agriculture such as introduction of modern cultural method and distribution of fertilizer are being channeled to farmers.

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APPENDIX D

Farmers Cooperative Marketing Association

SUMMARY OF INFORMATION GATHERED

Survey Data Information	Echague FACOMA	Alicia FACOMA	Cabanatuan City FACOMA
1. Name of Manager	Lucio A. Guzman	Leonardo Tomas	Leonila Chavez
2. Total Membership:	1,529	1,050	3,749
a. Active members	(413)	(20)	(2,560)
b. Inactive members	(1,116)	(1,030)	(1,189)
3. Basis of Manager's compensation	Salary and Commission	Salary basis per month	Salary plus commission on savings
4. Area cultivated by members (ha.)	9,174	6,500	4,700
5. Cavans produced by members	185,220	190,000	151,440
6. Marketing Agreements:			
a. Cavans pledged	128,400	90,000	131,440
b. Cavans delivered	74,000	3,000	82,000
7. Volume of Business:			
a. 12-mos. operation (cav.)	74,000	3,000	60,200
b. Value in pesos	1,110,000	45,000	902,660
8. Warehouse capacity in cavans	50,000	40,000	120,000
9. Per cent utilization of warehouse space at the time of survey	40	empty	25
10. Storage system	Piled in sacks	Piled in sacks	Piled in sacks
11. Transportation:			
a. Distance of Facoma to farthest farmer's field	13	10	28
b. Transport facilities	Trucks, jeeps, animal-drawn	Trucks, jeeps, animal-drawn	Trucks and jeeps
12. The sources of operating funds enumerated for the FACOMAS are as follows:			
a. Subscription of farmer members (P)	25,640	5,000	36,195
b. Earnings or savings of FACOMA	71,210	—	68,702
c. Loan from ACA (1965-66)	435,035	20,000	329,827
d. From other sources	140,000	10,000	21,020
TOTAL	P671,885	P35,000	P455,744

13. Current Palay Prices per Cavan of 45 Kilos:

GROUP OF PALAY	ECHAGUE		ALICIA		CABANATUAN	
	FACOMA	Local Trader	FACOMA	Local Trader	FACOMA	Local Trader
Fancy	₱17.30	₱17.40	₱17.50	₱17.60	₱19.00	₱20.30
Special	₱16.30	₱16.40	₱16.50	₱16.60	₱17.50	₱18.00
Ordinary	₱14.30	₱14.40	₱14.50	₱14.60	₱16.50	₱17.00

14. Packaging - palay received from farmer members is contained in jute sacks with fixed weight capacity of 45 kilos.

Use of sacks for 12 months operation

	Old	New
a. Echague FACOMA	6,000	70,000
b. Alicia FACOMA	3,000	—
c. Cabanatuan FACOMA	10,000	65,000
Total	19,000	135,000

15. Storage and Handling Costs:

The average cost of storage for all FACOMAS ranges from ₱0.20 per cavan per year in Alicia to ₱0.30 per cavan per year in Cabanatuan City. The handling cost per cavan is ₱0.05 in Echague and Alicia, Isabela and ₱0.10 in Cabanatuan City.

16. Suggestions:

Only the Alicia (Isabela) FACOMA registered some suggestions for adequate financial assistance and cooperative support from all its FACOMA members. This would solve its problems on fund sources and management.

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GROUP D - REPORT

MARKETING OF ABACA IN CAMARINES SUR AND ALBAY

ABELLA, Domingo R.
CLEMENTE, Dominador Jr.
MEDINA, Aristeo B.

INTRODUCTION

Abaca or **Musa textilis** is one of our major export products which **is indigenous** to the Philippines. The total area planted to abaca comprises **about** 192,540 hectares valued at P39,435,600.[1] The Bicol Provinces contributed 31 per cent of the total production which is the highest in any abaca producing region in the Philippines.

The production of abaca is mainly concentrated in the Bicol Provinces although steps are now being taken to introduce volume production in other provinces in the Visayas and Mindanao. In these areas, abaca producing land does not belong to any one large establishment or corporation but rather to small farmers which may be owners or leaseholders.

This survey was limited to the provinces of Camarines Sur and Albay which produce an aggregate production of 36 per cent of the Bicol Region. Farmers and exporters were interviewed in different towns. The middlemen who were engaged in buying and selling of abaca were not included since the exporters were directly buying from the producers.

OBJECTIVES

1. To trace the flow of abaca from the producer through the collectors, processors and exporters;
2. To obtain information on the area cultivated and production of abaca producers;
3. To gather information on the volume sold, prices and selling practices of farmers;
4. To obtain data on the cost of production of abaca per hectare;
5. To gather basic information on the production and marketing problems of the farmers (credit, grading, standardization, transporting, storage, etc.);
6. To collect information on the volume of commodities bought and disposed, buying and selling prices and their marketing problems;
7. To gather data on the number of wholesalers, volume handled, buying and selling prices; and
8. To gather information on warehousing, storage, grading and standardization problems of the wholesaler/exporter.

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[1] Crop, Livestock and Natural Resources Statistics, 1959.

RESULTS AND DISCUSSION

Producers

Out of the 15 farmers interviewed only 5 owned the farms they cultivate and the rest were leaseholders. The average area cultivated was 3 hectares. The average age level of the abaca farmers interviewed was 45, 25 years of which were dedicated to farming. The average number of dependents of the above-mentioned interviewed farmers was eight children.

The average number of hills per hectare was 1,126 with a production of about 1,689 kilos at approximately P1.14 per kilo. The frequency of harvest was twice a year, the farmers engaging in cottage industries between harvests to augment their income.

Pre-sale activities included harvesting, tuxying, stripping and drying, needing 8 weeks and 4 laborers per hectare per year at a cost of approximately P962.73 or 50 per cent of the gross income per hectare. Of the quantity produced, 2 per cent was utilized for home consumption and/or for cottage industry.

Upon completion of the drying stage (8 hours under the sun) the abaca fibers were transported to the roadside by animal-drawn carts and are loaded in trucks owned by the exporter and brought to the warehouse. In cases where farmers have access to a weighing machine, their products are weighed before loading into the exporter's truck. Farmers claim that in some cases where there is a difference (approximately 2 per cent) in weight registry between them and the exporter the findings of the latter prevailed. The farmers' choice of market outlet was influenced by three factors, namely: liberal financial assistance given by the exporter, high price quotations and proximity to the buyer.

Credit extended without collateral and interest to the farmers by the exporter, amounted to approximately P550.00 per hectare per year. Of this amount, 80 per cent goes to home consumption and 20 per cent, to production expenses. Loans were paid in kind at prevailing prices. Payment of goods to farmers without loans were made on a cash on delivery basis.

Exporters

The three major exporters of abaca fibers for Camarines Sur and Albay are: Leelin and Company, Inc.; Smith, Bell and Company, Inc.; and Abaca Corporation. Of the 40,000 bales produced in the area surveyed, 90 per cent is bought by Leelin and Company, Inc. and 10 per cent is distributed between the other two exporters.

Abaca fibers purchased from the producers are weighed and classified into various grades, e.g. CD, E, F, I, S_2, J1, and S_3. The use of a hydraulic press (maximum capacity, 200 bales a day), is employed in making bales weighing 126.5 kilos each. The cost of processing, handling and loading amounted to P8.00 per bale. Laborers engaged in processing are paid on a per kilo basis. The peak production month is August while November and December are the lean months.

From the warehouse, the bales are transported by trucks to the various points of embarkation like Tabaco, Legaspi, Tigaon, etc. The transportation cost from the warehouse to the piers averages P1.00/bale. Two types of arrangements are being followed in the shipment of the fibers to the importing countries. Depending on the agreement between the exporter and the importer, the Cost, Insurance and Freight (C.I.F.) or the Free on Board (F.O.B.) method may be employed.

Of the total production of abaca fibers in Albay and Camarines Sur, 50 per cent goes to the British Ropes, Ltd. in London, 30 per cent to the United States and 20 per cent to Japan. The British Ropes Ltd. influences to a large extent the prices of abaca in the world market. Due to the difficulties encountered in the production of high grade fibers, S_2, an easily produced grade acceptable to importers, constitute 50 per cent of the total export with other grades taking up the balance. The average prices of fibers exported are given in Table 1.

Table 1. **Abaca price quotations as of August 1965**

GRADES	AVERAGE PRICE/BALE
CD	P270.00
E	261.60
F	251.40
G	233.60
H	155.60
I	256.00
J1	244.80
K	200.40
M	189.20
M_1	122.40
S_2	222.64
S_3	211.60

PROBLEMS AND RECOMMENDATIONS

Producers

The producers are at the mercy of the exporters as far as grading and weighing are concerned. Farmers before selling, grade and weigh their fibers. However, the exporters re-grade and re-weigh the fibers in their warehouses. Usually, the farmers find themselves at the losing end of the transaction. To correct these irregularities, it is recommended that the Fiber Inspection Service take an active hand in the classification and weighing of fibers at the farm level to insure impartiality.

Due to the lack of marketing information, there is a possibility that the exporters may connive with one another to lower the buying price to increase their profits. In accordance with the recommendations mentioned in the first problem, it is further suggested that information on market prices be also considered as one of the responsibilities of the Fiber Inspector.

Exporters

The main problem of the exporters today is the decrease in demand for abaca fibers due to the increasing popularity of synthetics and substitutes (sisal, maguel, jute). The production cost of synthetics is considerably lower. In addition, synthetics and substitutes are not encouraging the producers to expand their hectarage. A possible solution to these problems is to establish a government to government contract with countries where the importation of raw materials is a monopoly of the government. Another solution is to conduct an exhaustive research to find ways and means of fully utilizing the abaca fiber and its by-products since 40 per cent of the plant is wasted.

CONCLUSION

In view of the existing problems, the abaca industry is threatened by a situation that could take disastrous proportions which would deprive millions of Filipinos of their means of livelihood. An immediate solution to the present problem could take the form of an integrated abaca pulp mill costing in the neighborhood of ₱20 million.

To increase the margin of profit of our local producers and exporters, it is advisable to limit the number of grades. Presently, there are 12 grades being exported. Due to the negligible differences among successive grades, the foreign rope makers usually mix the fibers together to produce 3 or 4 rope classifications according to the desired tensile strength.

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GROUP E - REPORT

A REPORT ON THE STUDY OF THE MARKETING OF COCONUT PRODUCTS IN SAN PABLO CITY AND NEIGHBORING TOWNS OF LAGUNA

CONSTANTINO, Lilia H.	Group Leader
GRACILLA, Porfirio	Member
KANAPI, Angel G.	Member
LOPEZ, Marciano B.	Member
BARRETO, Sisenando	Adviser

INTRODUCTION

Coconut (**Cocos nucifera, Linn.**) is a versatile crop that is produced extensively in several regions of the Philippines. The nuts and several parts of the coconut trees are processed into a variety of products and by-products that may serve multiple uses.

Rodriguez, F. C. refers to coconut as a general utility plant. Some of the most important uses of the coconut are tabulated below:

Product	**Uses**
1. Oil	Used in the manufacture of soap, butter, cream and other food products, used for bombs such as napalan synthetic rubber programs, plasticizers, safety glass, synthetic resins, etc.
2. Husk or coir	Manufactured into brushes, door mats, floor mats, rags, mattresses or coirflex, fish trap, etc.
3. Coconut milk	Good substitute for cow's milk.
4. Shell	Activated carbon, carbon electrodes, graphite, combustible gas meter fuel, etc.
5. Copra meal	Feeds, fuel, fertilizers.
6. Coconut water	Good medium for production of yeast, and high quality vinegar.

Current Coconut Situation in the Philippines

The Philippines has the largest coconut industry in the world today. It has 200 million coconut trees planted on 1,200,000 hectares (1964) in at least 36 of the total provinces in the Philippines. The industry roughly supports one third of the population including family members of planters and employees of processing plants for copra, oil and desiccated coconuts. This industry is one of the main dollar-earners of the country, contributing about 40 per cent annually to the foreign exchange earned through domestic exports.

Coconut is produced in large quantities in Southern Tagalog, Bicol Region, Visayas and Mindanao (see Tables 1, 2 and 3). The heavy producers of coconut are the provinces of Quezon, Laguna, Sorsogon, Albay, Samar, Leyte, Misamis Oriental, Davao and Zamboanga.

After the Second World War, the Philippines steadily rose to the premier position in the world market which was formerly occupied by Indonesia. The major coconut products exported to the world market are copra, coconut oil and desiccated coconut. In 1963, the total production in terms of copra equivalent, amounted to 1,586,640 long tons. Of this total export which is 86 per cent of total production, 61.4 per cent was copra, 19.5 per cent coconut oil and 5.1 per cent desiccated coconut (see Table 4). The 14 per cent for domestic use was in the form of manufactured oil, home-made oil and nuts consumed as foodnuts.

In 1964, copra export decreased to 54.2 per cent while coconut oil increased to 23.5 per cent and desiccated coconut to 5.3 per cent, resulting to a 3.01 per cent decrease in total exports and a corresponding increase in total domestic use. The increase in foodnut consumption of 2.9 per cent could be attributed to the government's drive towards increasing domestic consumption of coconuts as they provide readily available and cheap sources of protein for the country's growing population. Consumption per capita of coconuts in the Philippines is low compared with other countries. The average per capita consumption of copra and coconut products is much smaller than that of Ceylon.

At present there are 12 oil manufacturers in actual operation in the Philippines, producing an annual total of 209,264 long tons of oil in 1963 and 229,455 long tons in 1964 (see Table 5). The two biggest manufacturers of oil are the Lu Du & Lu Ym and the Legaspi Oil with an output of 33.6 per cent and 22.3 per cent, respectively, in 1963 and 40.7 per cent for Lu Du & Lu Ym in 1964 and 22.35 per cent for Legaspi Oil during the same year. In Laguna and neighboring towns of Batangas there are four (4) oil mills where coconut growers take their produce for processing (see Appendix 3).

Copra making in the Philippines is done by a large number of farmers, wholesalers and copra manufacturers scattered all over the coconut regions of the Philippines. The methods commonly employed in copra making are sun-drying and the "tapahan" method. The sun-drying method produces a high quality grade copra but could be used only for a limited number of days, while the "tapahan" could be operated for the whole year but produces a lower grade copra.

Desiccated coconut is produced by five (5) coconut desiccators all located in Quezon and Laguna. The Blue Bar Coconut Co. and Peter Paul Phil. Corp. are in Quezon, while Sun Ripe Coconut Products Inc. is located in Magdalena, Laguna, Red "V" Coconut Products is in Lucena City and Franklin Baker Company is located in San Pablo City.

The coconut industry as a whole is confronted by production and marketing problems. The marketing problems will however, be discussed in detail at the later part of this report. Low yield of nuts is a common production problem in most provinces. This is caused by frequent typhoons and poor cultural practices of the farmers. Another problem of production is the low grade quality of copra produced from the crude "tapahan". This production problem is inter-related to marketing and directly affects prices received by the farmers. Early picking of nuts for sale and the control of pests and diseases are problems that cause lag in copra production.

As stated earlier, the predominant contribution of the Philippines to world trade in coconut products has rendered a special significance to the coconut industry of the Philippines in the world coconut circle. The government is determined to maintain this position of the Philippines as supplier to the world market and it has conceived a development program that is being carried out by the Philippine Coconut Administration.

With the present resources of the Philippines in terms of area planted to coconuts and the size of the population engaged in this industry it is safe to visualize an expansion of the coconut industry. The Philippines is in a position to meet the prospective domestic requirements as well as the export requirements, to maintain the foreign exchange earnings from a rapidly expanding world market.

The World Situation for Coconut Products

In spite of the growing competition from other countries like Ceylon and Indonesia, the Philippine coconut products still has a ready market in Europe and the United States. This diversification of the foreign market started after the conclusion of the Laurel-Langley Agreement in 1956. It was soon realized that the Philippines should not depend on a single market (America) for exports. Prior to the Laurel-Langley Agreement about 65 per cent of Philippine copra was exported to the United States and 30 per cent to Europe. Now, more and more copra is being diverted to the European Sector and about 60 per cent of the total copra exports are for Europe and about 30 per cent to the United States, with the remaining 5 per cent for Japan, South American countries and others.

Coconut oil has strong competition from Babassu oil produced in Brazil, which is duty free, palm kernel oil, palm oil, soya bean oil, cotton seed oil, whale oil and tallow.

The world consumption requirement for oil has been roughly estimated at 800,000 metric tons while the estimated total world increase of production of five major sources of oils amounted only to 332,000 metric tons.

The increasing world demand for coconut products coupled with the diversification of our foreign market assures a steady market for Philippine coconut production.

Objectives of the Study (Case Study)

1. To determine the marketing channels used to supply coconut and coconut products to end-consumers.

2. To study the marketing practices of the farmers, wholesalers and processors for the purpose of analyzing the problems and relative efficiency of the different marketing procedures and in the use of different marketing channels.

3. To determine the marketing margins at the different levels of marketing.

4. To determine the major marketing problems at the different levels of marketing and to study possible ways of meeting them.

Area Visited, Procedure Used, Problems and Limitations of the Study

San Pablo City and the neighboring towns of Laguna were selected for this case study because of their proximity to Manila and the presence of different types of processing plants as well as coconut growers. This was necessary because of the limited time and facilities available and the small size of the group that participated in this study.

A total of fifteen (15) schedules were completed during the first three days of the field work. This consisted of 7 schedules for the farmers, 5 schedules for wholesaler (middleman) and 3, for processors. The last day of the field work was used to visit the Production Division of the Philippine Coconut Administration, the Coconut Growers Association and some copra dealers in Manila.

DISCUSSIONS OF RESULTS

Producers

The "coconut producers" interviewed in Laguna are coconut plantation owners who employ plantation watchers or caretakers for the upkeep of the plantation. Normally, the caretakers furnish the labor required while the producers purchase the materials and implements needed in the maintenance of the farm. The caretaker normally gets 1/7 of the coconuts produced. Some of the caretakers, however, cultivate and plant intercrops like palay, corn and others with the consent of the producers. If the caretaker supplies the work animals, farm implements, fertilizer and the labor in the cultivation of the crop, he shares 70 per cent of the produce while 30 per cent goes to the owner and vice-versa when the owner supplies the things needed for the cultivation and planting of the crops.

The coconut producers have several alternatives in the marketing of their products (see Appendix 1).

1. The producer may sell his produce to the coconut traders or wholesaler, who in turn sells the coconuts to the Franklin Baker Company for processing into desiccated coconut for export. The wholesaler then assumes all of the harvesting and transporting costs from the farm to the factory. The wholesaler buys the nuts at P70-P80 per 1000 nuts and sells them to Franklin Baker Company at about P115 per 1000 nuts. Table 6 shows the expenses involved in the hauling and transporting of nuts to the factory site including the cost of producing of discarded nuts into copra which amounted to P111.26 per thousand. The total receipts from the

sales of coconut and copra amounted to P120.04 per 1000 nuts. The average marketing margin of the wholesaler is P8.57 per !000 nuts.

2. Direct sale from producer to processor. The cost of harvesting and transporting of nuts amounts to P19.10 per 1000 nuts as shown in Table 8.

3. The producer makes copra and sells it to the copra wholesaler who in turn sells it to the oil refineries or exports the copra. The cost of harvesting and transporting of nuts and other expenses from the farm to copra driers is P17.76 per 1000 nuts (see Table 8).

4. Coconut growers sell the coconuts to copra maker/wholesalers at the farm and this is converted into copra on the spot and transported as such by the wholesaler. This marketing practice was observed in plantations that were not easily accessible to transportation facilities. A relatively lower price of P5.00, lower than the existing market price per thousand nuts is paid to the coconut grower by buyer who usually has made cash advances for the produce. This is a short term credit without apparent interest and liquidated after each harvest. Table 6 shows Planter No. 3 as an example of this marketing practice.

Comparing the relative efficiency in marketing the produce, as determined by the net income per hectare and per thousand nuts, the producer who disposed of his coconuts directly to the Franklin Baker Company (Planter No. 4) registered the highest income of P76.67 per 1000 nuts as shown in Table 7. This is followed by Planter No. 5 who directly processes his nuts into copra, and then by Planters 2 and 3 who sell the nuts to the coconut wholesaler. These observations indicate that it is advisable for coconut producers in the area surveyed to sell their nuts directly to the processor. Small planters who can not afford the expenses involved and time required in the disposal of their harvested coconuts at a more profitable level should group and organize themselves so as to market their produce more efficiently. It was observed that there is no farmer's cooperative in the area surveyed to serve the marketing needs of the small farmers.

Wholesalers

The marketing of coconuts on the wholesale level is done by two groups of wholesalers, the big coconut planters and the middlemen. The pattern through which coconuts move from producers to desiccating factories (the main buyers) are as follows:

1. Large coconut planters sell their produce direct to the desiccators and at the same time buy from other farms in nearby areas. The rejected nuts are processed into copra which in turn is sold to oil crushers.

2. Middlemen/wholesaler buys nuts from small producers and sells them to desiccators and rejected nuts are either returned to producers or converted to copra for oil.

Copra marketing on the wholesale level is done in several types of wholesalers.

a. Big planters producing copra from rejected nuts.

b. Wholesalers buying copra from small farmers.

c. Big planters who produce only copra and do not sell nuts to desiccators.

d. Wholesalers who buy nuts and process them to copra.

The marketing of coconut oil, on the other hand, is a more simple and efficient process. It is done directly by the factory, and/or middlemen. Sometimes a broker is employed. The oil is shipped to Manila and delivered to local consumers like soap and refined oil factories while those for export are shipped abroad.

Desiccators and/or Exporters

The processors referred to in this case study are of two types, the coconut desiccators and the copra crushers.

1. Desiccator

The Franklin Baker Company of the Philippines, a subsidiary of General Foods Corporation, is located at San Pablo City. Desiccated coconut exported by the company accounts for 40 per cent of the total annual desiccated coconut exports of the Philippines. Its raw material requirement of husked coconut averages 600 metric tons per day (approximately 720,000 nuts per day) of which 40 per cent are supplied directly by coconut planters (farmers) and 60 per cent from wholesalers (middlemen) on a contract basis. The plant turns out the following products (see Appendix 2):

a. Desiccated coconut — in 20 grades at the rate of 108 tons or 2,000 bags a day.

b. Crude oil — 14 tons a day

c. Copra cake — 8 tons a day

The desiccated coconut and most of the crude oil and copra cake are exported to General Food Corporation in the United States.

It is interesting to note that of the 150 tons of coconut shells accumulated in a day, 70 per cent is utilized as fuel for the plant boiler and 30 per cent is sold to local coconut shell charcoal maker, while the coconut water of about 192 tons a day is thrown away.

At present, the company has no marketing problems for its finished products; most if not all are exported to the United States, and the demand for desiccated coconut in the world market is growing at the rate of 3 per cent annually.

The problem of the company, however, is the difficulty of maintaining the plant's daily raw material requirements of 720,000 husked coconuts during the lean months of March, April and May because of the keen competition from four other coconut desiccators in the region (one in Magdalena, Laguna and three others in nearby towns of Quezon Province).

2. Oil millers (crushers)

a. The San Pablo Oil Manufacturing Company owned by PAVIO Corporation is located in San Pablo City. Its daily raw material requirement averages about 165 metric tons which is supplied by the different copra wholesalers (middlemen) in the region. The daily coconut crude oil produced is about 105 tons. On the average 30 tons of this crude oil is refined and canned for domestic consumption, while the 75 tons are stored and shipped in huge tank trailers to Manila for export. The copra cake or meal produced averages about 55 tons daily, and is shipped to Manila for distribution, 80 per cent of which is exported and 20 per cent, for local consumption. The refined oil is sold locally under the brand name of MINOLA cooking oil. It is interesting to note that the decision to undertake production of refined oil is dependent on world prices for crude oil. If the price for crude coconut oil is high, the company's total production of crude oil is exported, and no refined oil is produced.

The company does not plan to expand its production facilities because conversion costs in San Pablo is almost the same as those of companies in the Manila Area. This is due to the fact that labor and copra prices in San Pablo are almost the same as in Manila Area.

b. The Philippine Refining Company, Inc. (PRC), a subsidiary of UNILEVER, is located at United Nations Avenue, Paco, Manila. Its daily copra requirement averages about 250 metric tons, which is supplied by copra dealers (wholesalers) from Laguna, Quezon, Batangas and Cavite. The coconut crude oil produced daily amounts to about 160 tons, 80 per cent is used for PRC products like soap, shortening and margarine, and 20 per cent is exported. Of the 80 tons of copra cake produced daily, 90 per cent is exported and 10 per cent sold to the domestic market. Most of the products are exported to the United States and very little is sent to Europe and South Africa. This company can very easily expand its capacity by about 20 per cent with a minimum of investments in additional equipment.

In cooperation with Dr. Subrahmanyan, an FAO Food Technologist from India, PRC is conducting research on the drying of coconut kernels into a high quality copra without the use of machinery or heat. The process makes use of ordinary lime applied on the coconut kernel. The finished product has a low moisture content and less prone to fermentation and deterioration. The marketing problem of PRC is the lack of bottoms for exporting copra cake or meal.

The oil millers (crushers) visited shared the opinion that there is a need for the producers to improve the quality of copra. These oil millers are willing to pay a good price for better quality grade of copra and premiums are offered to encourage production of quality copra.

Processors in general do not have serious marketing problems. There is no over supply as they can always process all of the copra that is available as raw materials for their respective requirements.

Table 9 shows the marketing margins in the processing and marketing of one metric ton (1,000 kilos) of coconut oil.

MARKETING PROBLEMS

The common problems of coconut growers and copra producers in the area surveyed are:

Market information. Information on prices is quite inadequate among farmers and producers in the region. The big planters get their information on prices from buyers, processors and exporters, and in turn relay the information to small planters in the area whom they buy copra and coconuts. The small planters, therefore, have no first hand knowledge of actual or correct prices of their produce.

Credit facilities. The big planters have very little, if there is any at all, problem on credit facilities. They have adequate capital and in addition they are given credit facilities by the buyers of their products. Inadequate credit facilities however, greatly affect the small planters in the area. These farmers have no alternative but to tie up their produce with these big planters and alien wholesalers. They have no freedom to choose the right market for their produce. Moreover, in times of urgent need for cash, they produce copra improperly (use of unripe nuts) resulting to low-priced-poor-quality copra.

Transportation. The problem of transportation is most common in remote areas. The farmers transport their produce on push carts drawn by animals or on horseback. The method is rather a slow and expensive process as they spend more for labor and consume more time in moving the goods which otherwise could have been used for other productive purpose. The lack of feeder roads greatly hamper efficient marketing of produce in the area surveyed.

Quality. The quality of copra produced in the area is sub-standard. This is because producers use **tapahan** for drying copra. The use of better driers will indeed improve the quality of the product and, therefore, command better prices both locally and abroad.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

1. Producers (coconut growers)

   a. That producers are not properly organized in the marketing of their products, such that profits realized decrease proportionately to the channel used for the disposal of their produce (see Appendix 1).

   b. That poor quality copra produced by the inefficient "tapahan" method of drying and the harvesting of unripe nuts, as well as improper grading procedures (without the use of moisture meter) results to lower prices and weaker bargaining power of the producers.

c. That there is a need for adequate and timely market information to enable producers to seek and demand better prices for their produce.

d. That lack of liberal credit facilities forces small producers to continue patronizing alien middlemen.

e. That lack of adequate transportation and storage facilities hamper the improvement of the present marketing practices.

2. Wholesalers (middlemen)

That the presence of middlemen in the present marketing channel is necessary inasmuch as they serve as financiers of the small farmers by giving advances without collaterals with only the promise to deliver future crops.

3. Processors (oil millers, desiccators and copra makers)

That coconut processors are well established and perform their marketing functions efficiently.

Recommendations

1. Coconut growers should organize themselves systematically to improve their marketing practices so as to realize bigger profits. The government should back up farmer organizations with adequate credit facilities.

2. Coconut growers should be made to realize that good quality copra produced by efficient methods of copra making will command higher prices. In this connection the proper government agency should launch extension services as well as intensive researches for better methods of copra making.

3. Coconut growers should be provided with timely and adequate marketing news services.

4. The government should improve road conditions by constructing extensive feeder roads to serve the remote coconut regions.

5. Producers should undertake diversification of the uses of coconut and its by-products to increase their income on periods between harvest.

6. The producers should practise the diversification of the utilization of the land between the coconut trees to augment their income.

7. The government on a long range program should study the feasibility of nationalizing the coconut industry.

Table 1. Coconut (summary): Area planted, total and bearing trees and total nuts gathered by region, Philippines, 1964

Region	Area Planted	Trees		Total Nuts Gathered
		Total	Bearing	
	(Hectares)	(Number)	(Number)	
PHILIPPINES	1,482,890	232,135,600	191,392,200	7,222,164,200
Ilocos	2,800	455,600	280,100	11,154,900
Cagayan Valley	5,910	919,800	567,500	24,375,800
Central Luzon	15,460	2,753,000	2,518,000	110,887,500
Southern Tagalog	277,790	52,110,300	48,474,600	1,804,488,900
Bicol	218,280	38,745,800	22,126,300	913,255,800
Eastern Visayas	306,350	51,196,400	41,212,000	937,533,900
Western Visayas	124,230	20,636,900	17,560,600	899,143,600
Northern & Eastern Mindanao	274,590	33,389,000	29,997,600	1,157,238,200
Southern & Western Mindanao	257,480	31,928,800	28,655,500	1,364,085,600

Table 2. Coconut (summary): Total nuts gathered and quantity of nuts used in the manufacture of copra, desiccated coconut and home-made oil and nuts for food by region, Philippines, 1964

Region	Total	Products			Nuts Used as Foodnuts
		Copra	Desiccated Coconut	Home-made Oil	
PHILIPPINES	7,222,164,200	6,508,229,900	260,302,500	37,722,200	415,909,600
Ilocos	11,154,900	3,150,000	4,125,600	340,000	3,539,300
Cagayan Valley	24,375,800	450,000	—	1,062,500	22,863,300
Central Luzon	110,887,500	76,156,200	—	342,900	34,388,400
Southern Tagalog	1,804,488,900	1,617,001,900	184,064,400	550,300	2,872,300
Bicol	913,255.800	893,920,400	—	6,806,000	12,529,400
Eastern Visayas	937,533,900	884,630,300	—	179,400	52,724,200
Western Visayas	899,143,600	898,526,800	—	193,800	423,000
Northern & Eastern Mindanao	1,157,238,200	1,093,109,600	61,762,500	2,129,300	236,800
Southern & Western Mindanao	1,364,085,600	1,041,284,700	10,350,000	26,118,000	286,332,900

Table 3. Coconut (copra and desiccated): Quantity and value of production, by region, Philippines, 1964

Region	Copra		Desiccated	
	Quantity	Value	Quantity	Value
	(Kilograms)	(Pesos)	(Kilograms)	(Pesos)
PHILIPPINES	1,487,159,900	594,863,900	62,957,900	34,503,500
Ilocos	700,000	259,000	916,800	495,100
Cagayan Valley	100,000	32,000	—	—
Central Luzon	16,923,000	8,630,700	—	—
Southern Tagalog	400,220,900	160,333,900	46,016,100	25,308,900
Bicol	198,649,000	91,378,500	—	—
Eastern Visayas	196,584,500	70,770,400	—	—
Western Visayas	199,672,600	71,882,100	—	—
Northern & Eastern Mindanao	242,913,300	87,448,800	13,725,000	7,411,500
Southern & Western Mindanao	231,396,600	104,128,500	2,300,000	1,288,000

Table 3. (Cont'd.) Coconut (Home-made Oil and Foodnuts): Quantity and value of production, by region, Philippines, 1964

Region	Home-made Oil		Foodnuts	
	Quantity	Value	Quantity	Value
	(Liters)	(Pesos)	(Number)	(Pesos)
PHILIPPINES	4,437,880	2,973,400	415,909,500	29,113,700
Ilocos	40,000	36,800	3,539,300	283,200
Cagayan Valley	125,000	108,700	22,863,300	1,600,400
Central Luzon	40,340	37,100	34,388,400	2,751,100
Southern Tagalog	64,740	46,000	2,872,300	172,300
Bicol	800,700	588,400	12,529,400	1,002,400
Eastern Visayas	21,100	15,200	52,724,200	3,163,500
Western Visayas	22,800	16,000	423,000	33,800
Northern & Eastern Mindanao	250,500	127,900	236,700	18,900
Southern & Western Mindanao	3,072,700	1,997,300	286,332,900	20,088,100

Table 4. Coconut production and exportation in terms of copra, Philippines, 1962-1964 (In Long Tons)

Exported Product	1957 Peak Year		1963			1964		
	Base Weight	Percent of Total	Base Weight	In Terms of Copra	Per cent of Total	Base Weight	In Terms of Copra	Per cent of Total
Copra	988,366	70.03	943,355	943,355	61.37	839,064	839,064	54.21
Coconut Oil	147,613	10.46	209,214	332,086	19.55	217,878	364,214	23.53
Desiccated Coconut	69,480	4.57	73,927	89,069	5.08	67,559	81,396	5.25
Total Export	1,200,459	85.06		1,364,510	86.00		1,284,674[a]	82.99
Manufactured oil locally consumed/sold and in stock	178,247)	13.27		211,941)	13.54		203,689)	13.65
Home-made Oil	9,111)			2,955)			7,522)[b]	
Nuts consumed as foodnuts	23,555	1.67		7,843	0.46		51,915	3.36
Total domestic use	210,913	14.94		222,739	14.00		263,126	17.01
Total Production	1,411,372	100.00		1,586,640	100.00		1,547,800	100.00
Index: Base : 1963	88.95			100.00			97.55	

[a] Based on the actual tonnage applied for loading during the calendar year 1964, from the Standards Department, Philcoa.

[b] Crop year data from the Bureau of Agricultural Economics, June 1963 to July 1964 at 54 per cent extraction rate from copra.

Source: Philippine Coconut Administration.

Table 5. List of coconut oil manufacturers in the Philippines, 1965 (In Long Tons)

Name of Factory	1963		1964		1965 (Jan - July)	
	Quantity	Per cent	Quantity	Per cent	Quantity	Per cent
Lu Du and Lu Ym.	70,398	33.64	93,515.70	40.75	55,833.83	47.30
Legaspi Oil	46,725	22.32	51,275.00	22.35	26,444.00	22.42
Wee Kun	12,015	5.74	14,522.64	6.33	10,059.00	8.53
Batjak (Union)	36,605	17.49	22,710.00	9.90	1,500.00	1.26
Unifood (San Pablo)	19,323	9.24	14,530.65	6.33	8,790.00	7.44
Imperial Vegetable Oil	12,093	5.78	18,154.00	7.91	10,190.00	8.63
PRC	10,396	4.97	9,972.00	4.35	4,375.00	3.80
PMC	1,100	0.53	3,150.00	1.37	555.89	0.47
Copra Agencies	—	—	—	—	—	—
Central Vegetable Oil	—	—	—	—	—	—
Lucena Oil	610	0.29	1,056.00	0.46	190.00	0.16
Royal Manufacturing	—	—	570.00	0.25	—	—
TOTAL	209,264	100	229,455.99	100	117,938.02	100

Source: Philippine Coconut Administration

Table 6. Receipts and disbursement of coconut wholesalers per 1000 nuts, San Pablo City

WHOLE-SALERS	Paid to Pro-ducers	DISBURSEMENTS				DISCARDED NUTS[b]		RECEIPTS		Marketing Margin
		Har-vest-ing	Fil-ing	Husking	Trans-porting[a]	Copra Making[a]	Value	Sale of Nuts	Sale of Copra	
					(Pesos)					
1	80.00	3.50	1.50	3.50	10.66	0.42	13.55	115.00	5.04	6.91
2	80.00	3.50	1.50	3.50	10.66	0.42	13.55	115.00	5.04	6.91
3	75.00[d]	3.50	1.50	3.50	10.66	0.42	12.95	115.00	5.04	11.91
AVERAGE	78.33	3.50	1.50	3.50	10.66	0.42	13.35	115.00	5.04	8.57

[a] Consists of transportation from farm to roadside (wholesaler's place) at ₱4.00 per 1,000 nuts and transportation from roadside to Franklin Baker Company at ₱8.00 per ton of nuts. One ton of nuts is normally equivalent to 1,200 nuts.

[b] Estimated from experience of wholesalers at about 12 per cent or 1000 nuts discarded per 8000 nuts delivered to Franklin Baker Company.

[c] It costs ₱3.50 per 1000 nuts in copra making which consists of splitting, drying, piling and packing of copra. Transportation of copra is shouldered by the copra trader. The discarded nuts were estimated to yield 100 kilograms copra per 1,000 nuts. The normal yield of normal nuts is about 200 kilograms copra per 1,000 nuts. Copra is bought by copra trader at ₱12.00 per 100 kilograms.

[d] Extended cash advances to farmers without interest and nuts sold to this wholesaler were smaller in size.

Table 7. Annual income and expenses of five coconut planters, San Pablo City

PLANTERS	PRODUCTION		VALUE		EXPENSES		INCOME		
	Nuts	Copra	Nuts	Copra	Nuts	Copra	Total	Per 1000 Nuts	Per Hectare
	(1000 Nuts)	(100 kg.)	(₱)	(₱)	(₱)	(₱)	(₱)	(₱)	(₱)
1	2,400	—	180,000	—	25,714.45	—	154,285.55	64.28	1,542.85
2	167	—	13,440	—	1,920.00	—	11,520.00	68.57	1,645.71
3	1,600	—	128,000	—	18,285.90	—	109,714.10	68.57	2,194.28
4	904	—	103,960	—	34,653.33	—	69,306.67	76.67	990.09
5	720	1,580	—	71,179	—	21,353.70	49,825.30	69.20	2,491.26

N.B. 1. Expenses of Planters No. 1, 2 and 3 are on the sharing basis with their watchers who get 1/7 of the produce. They sell their produce to a wholesaler.

2. Planter No. 4 had an arrangement with an overseer who shoulder all farm expenses including harvesting, husking, and transportation and who in turn gets 30 per cent of the produce. The planter sells his produce directly to the manufacturer or processor.

3. Planter No. 5 converts into copra all his coconut produce. He pays for the labor and handling 30 per cent of the copra he made out of his coconuts.

4. Copra is sold at ₱53 per 100 kilogram resecada basis. Fifteen (15) per cent deduction in weight is applied to B-C class of copra if sold as such.

Table 8. Cost of production per 1000 nuts sold as nuts and copra to manufacturer

ITEM	NUTS		COPRA	
	Cost	Per Cent	Cost	Per Cent
	(₱)		(₱)	
1. Harvesting	3.50	18.27	3.50	19.71
2. Filing	1.50	7.83	1.50	8.44
3. Husking	3.50	18.27	3.50	19.71
4. Transporting:				
a. Farm to roadside	4.00	20.88	4.00	22.52
b. Roadside to factory	6.66	34.75	—	—
5. Splitting	—	)		
6. Drying	—	)	3.50	19.71
7. Packing	—	)		
8. Transporting	—		1.76*	9.91
TOTAL	19.16	100.00	17.76	100.00

* Based on transporting of copra at ₱8.00 per ton and on the production of 220 kilograms of copra per 1000 nut.

Table 9. Hectarage and production of coconut planters, San Pablo City

Planters	Area Planted	No. of Trees Per Hectare	Total Number of Trees	Number of Bearing Trees	No. of Nuts Produced Per Tree	Total No. of Nuts per Harvest	Frequency of Harvesting	Total Harvest Per Year
	(ha.)					(1000 nuts)		(1000 nuts)
1	100	200	20,000	20,000	15	300	8	2,400
2	7	200	1,400	1,400	15	21	8	168
3	50	200	10,000	10,000	20	200	8	1,600
4	70	145	12,500	11,300	10	113	8	904
5	20	200	4,000	4,000	30	120	6	720
Average	49.4	189	9,336.6	9,340	18	150.8	7.6	1,158.4

N.B. 1. Planters Nos. 1, 2 and 3 are selling their produce to coconut wholesalers who sell their purchased nuts to the Franklin Baker Company.
2. Planter No. 4 sells directly his produce to the Franklin Baker Company.
3. Planter No. 5 directly handles the copra-making of his produce.

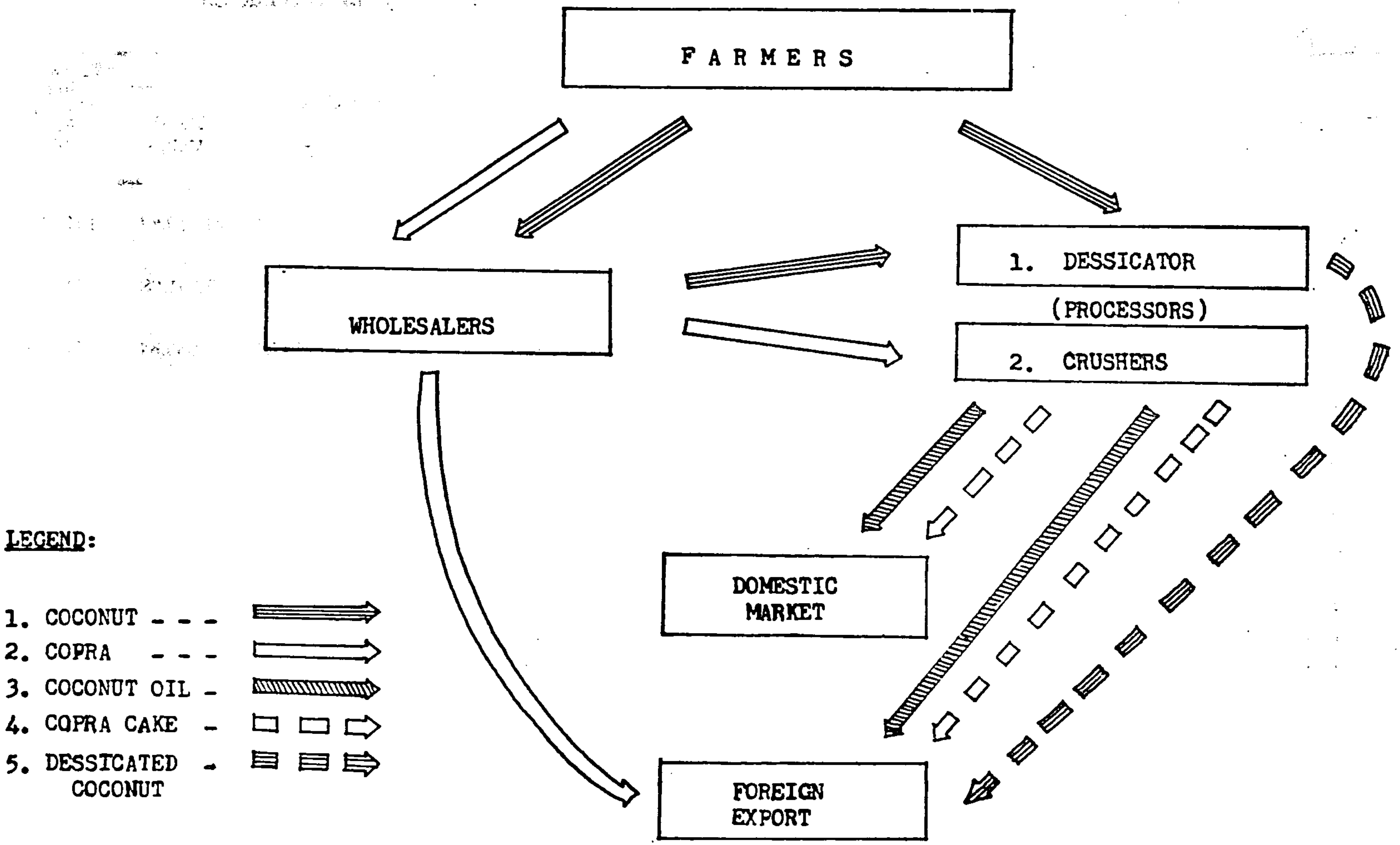
Table 10. Processing and marketing of one metric ton (1,000 kilos) of coconut oil[1]

Processor	Production and Marketing Costs					Proceeds of Sale					Marketing Margin Per 1,000 Kilos
	Cost of Copra		Conversion Cost	Delivery	Total Cost	Coconut Oil		Copra Cake		Total Value	
	Quantity (Kilos)	Unit Price (Per Kilo)				Unit Price (Per Kilo)	Value	Unit Price (Per Kilo)	Value		
A	1,600	₱0.53	₱40.00	₱ 8.25	₱896.25	₱0.90	₱900.00	₱0.28	₱119.84	₱1,019.84	₱123.59
B	1,600	0.55	35.00	6.25	921.25	0.92	920.00	0.26	111.28	1,031.28	110.03
C[2]	1,600	0.53	40.00	17.25[3]	905.25	0.92[4]	920.00	0.28	119.84	1,039.84	124.29

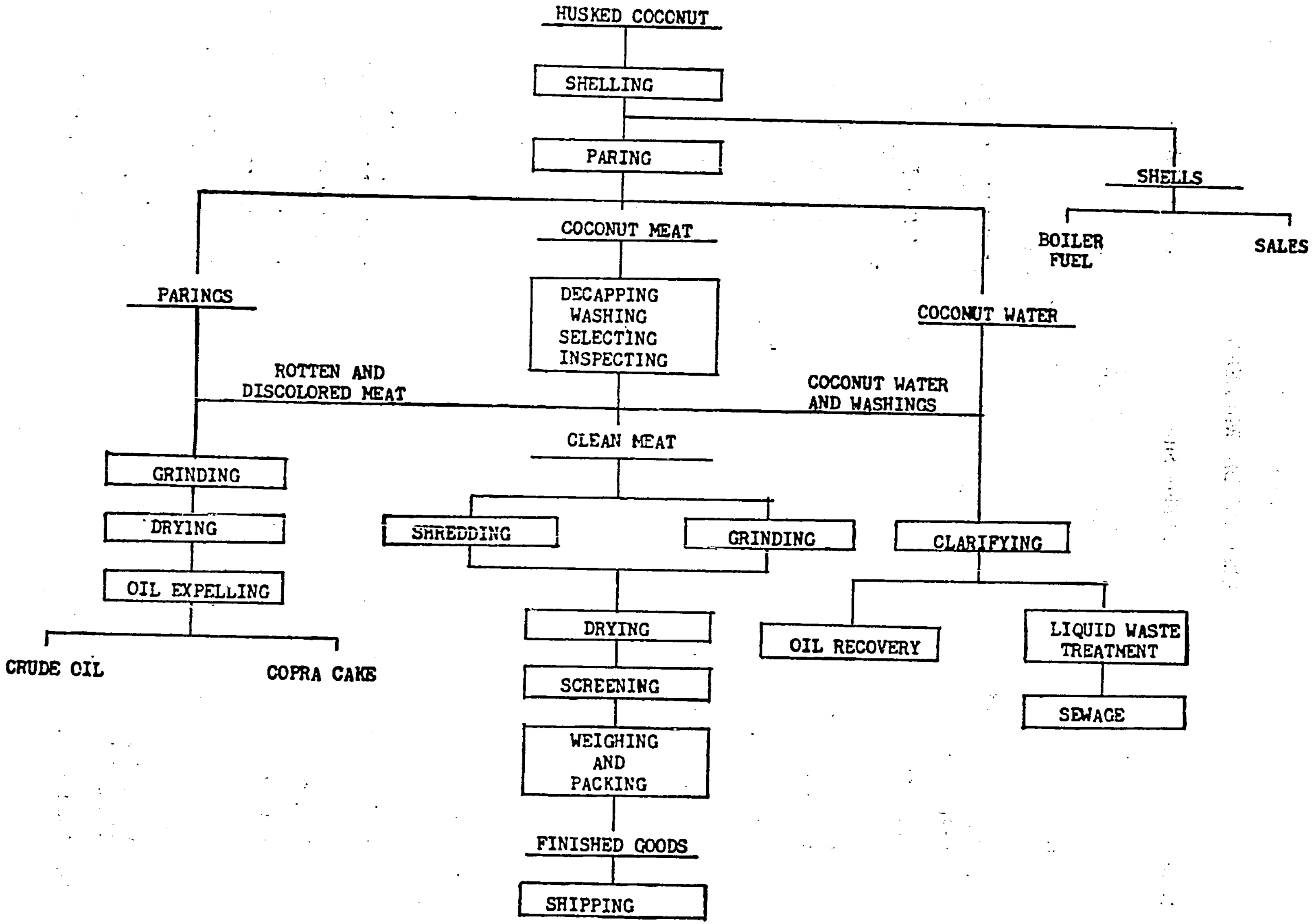
LEGEND:

A — San Pablo Oil Mfg. Co.
B — Philippine Refining Company
C — Lucena Oil
1 — Processing and marketing expenses do not include taxes.
2 — Processing for export.
3 — This includes trucking and lighterage.
4 — Based on the price in U.S. at 13 cents per pound, equivalent to ₱0.92 per kilo, f.o.b. basis.
5 — Assumption: For every 100% copra:
coconut oil — 61%
copra cake — 33%

Marketing Channels of Coconut and Coconut Producers in San Pablo City and Nearby Towns



APPENDIX B — Desiccated Coconut Flow Sheet, Franklin Baker Company of the Philippines



APPENDIX C

LIST OF OIL MILLERS

Name of Miller	Milling Site	Business Address
1. Imperial Vegetable Oil Co.	Tomas Claudio St. Pandacan, Manila	same
2. Philippine Refining Co., Inc.	United Nations Avenue, Paco, Manila	same
3. Procter & Gamble Phil. Mfg. Corporation	Velasquez, Tondo, Manila	PMC Bldg., San Luis Ermita, Manila, Phil.
4. Royal Manufacturing Co.	Rizal St., Makati, Rizal and Lucena City	534 San Fernando St. Binondo, Manila, Phil.
5. Central Vegetable Oil Mfg. Company	1765 Otis St., Pandacan, Manila	466 Recto Avenue, Manila, Phil.
6. International Oil Factory	Riverside St., San Juan Rizal	Muelle de Binondo, Binondo, Manila, Phil
7. Pangasinan Mfg. Co.	Dagupan City, Phil.	534 San Fernando St., Binondo, Manila, Phil.
8. Wee Kun Coprax Industry Company Incorporated	Zamboanga City	7th Floor, China Bank Bldg., Dasmariñas, Manila
9. Lu Do & Lu Ym Corp.	Cebu City	Equitable Bank Bldg., Juan Luna, Manila
10. Legaspi Oil Company	Legaspi City	3rd Floor, Singson Bldg., Plaza Moraga, Manila
11. Batjak, Incorporated	Jimenez, Mis. Occ. and Davao City	305 Puyat Bldg., Escolta, Manila, Phil.
12. Richcoco Products	Bacolod City	Bacolod City, Phil.
13. Cebu Copra Company	Mandawe, Cebu City	Mandawe, Cebu City, Philippines
14. Lucena Oil Factory	Lucena City	2nd Floor, China Bldg. Manila, Phil.
15. San Pablo Oil Mfg., Co. Unifood Manufacturers, Inc.	San Pablo City	6th Floor, Bank of PI Bldg., Manila
16. Tantoco Enterprises, Ltd.	Lucena City	Iyam St., Lucena City

LIST OF COCONUT DESICCATORS

Name of Miller	Milling Site	Business Address
1. Blue Bar Coconut Co.	Lusacan, Quezon	Chicago & 24 St., Port Area, Manila
2. Sun Ripe Coconut Products, Inc.	Magdalena, Quezon	365 Muelle de Binondo, Manila, Phil.
3. Peter Paul Phil. Corp.	Candelaria, Quezon	6th Floor Tuason, Bldg., Escolta, Manila, Phil.
4. Red "V" Coconut Products	Lucena City	7th Floor Trade & Commerce Bldg., Juan Luna, Manila
5. Franklin Baker Company	San Pablo City	2nd Floor, Moserco Bldg., Port Area, Manila, Phil.

LIST OF COCONUT SHELL CHARCOAL EXPORTERS

1. Pablo G. Dilag Enterprises	Mendoza St., Quiapo, Manila or c/o Delgado Bros.
2. Upex (San Pablo) Inc.	Rm. 311 Quisumbing Bldg., Dasmariñas St., Manila, Philippines
3. Oriental Commercial House	R-210-163 Dasmariñas St., Manila, Phil.
4. EFCO Mfg. Enterprises (coir-dust)	Rm-221 Natividad Bldg., Escolta, Manila, Phil.

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PART III

RESOLUTIONS

WHEREAS, the First National Seminar on Agricultural Marketing held at the WHO Building, Manila, Philippines, from September 7-27, 1965, provided in-service training in agricultural marketing to personnel of government and private agencies involved in the improvement of agricultural marketing system in the Philippines;

WHEREAS, this Seminar provided excellent opportunity for participants from 21 government and private agencies represented to exchange their experience, knowledge and ideas in the field of agricultural marketing to enable them to perform their individual duties more effectively and thus contribute to the economic development of this country;

AND WHEREAS, this Seminar was made possible by the assistance of the Food and Agriculture Organization of the United Nations, the Department of Agriculture and Natural Resources and other government agencies;

NOW, THEREFORE, BE IT RESOLVED by the First National Seminar on Agricultural Marketing held at the WHO Building, Manila, Philippines, from September 7-27, 1965, in plenary session assembled, that the resolutions and recommendations which are included and form part of the report be unanimously approved;

AND BE IT FURTHER RESOLVED, that copies of this report with the resolutions and recommendations, be forwarded as early as possible to all the participants, lecturers and observers and persons and/or organizations which may be in a position to assist in the implementation of these resolutions.

Resolution No. 1:

RESOLVED, that the Seminar expresses its warm stands to:

(a) Secretary Jose Y. Feliciano, Department of Agriculture and Natural Resources for his wholehearted support and interest to make the Seminar a possibility and a success.

(b) Director Eugenio E. Cruz, Bureau of Plant Industry, Chairman, Organizing Committee and Director of the Seminar for his efficient leadership in the Organizing Committee, for his enthusiasm and untiring efforts in making this Seminar possible and in bringing it to a successful conclusion.

(c) Director General of FAO for making available three specialists, v.z. Messrs. Shah, Mittendorf, and Arzadon.

(d) Mr. F. A. Shah, FAO Regional Marketing Specialist for Asia and the Far East, Co-Director of the Seminar, for his initiative in broaching the idea of establishing a short-term national center on agricultural marketing patterned after that of the Malaysia Center and for his effective ways of directing and managing the Seminar and for the numerous well-organized papers.

(e) Members of the Organizing Committee for their cooperation and deep interest in the Seminar.

(f) Mr. Stig Andersen, FAO Country Representative for his assistance and cooperation.

(g) WHO for the use of the hall and other facilities.

(h) Miss Josefa Mangubat and members of the Finance Committee for the able management of funds.

(i) Mr. Zosimo Falcis and members of the Public Relations and Publicity Committee for an excellent publicity and for working outside office hours without compensation.

(j) Mr. Honesto R. Mercado and his secretarial staff for the prompt distribution of lecture materials.

(k) The members of the General Services, general utility men and receptionists, for efficiently performing the jobs assigned to them.

(l) Office of the President of the Philippines for Executive Order No. 123.

(m) Firms, agencies and/or offices visited by the participants for their assistance and cooperation.

(n) Heads of offices who have sent participants to the Seminar for their support of the program.

(o) The Presidential Guards Battalion Band and the Philippine Navy Band.

Resolution No. 2

RESOLVED, that the Seminar in plenary session adopts the following recommendations:

(a) That a National Agricultural Marketing Institute be established with the primary functions of training and research and demonstration. And that technical as well as financial support of FAO and other international bodies, and privately endowed-agencies be solicited to carry out the program. Preferably, the Institute should be attached to an academic institution.

(b) That FAO be requested to provide a marketing expert to advise and assist the government in the formulation of marketing policies, in conducting research training of local officials and to undertake survey to provide material and justification for the establishment of the proposed training and research institute.

(c) That FAO and other international bodies be requested to provide a few fellowship for qualified Filipinos who will undertake training abroad in the field of agricultural marketing.

(d) That a National Agricultural Marketing Research Committee be created to coordinate research efforts on the marketing of agricultural products. The Chairman of the committee will be the Director of the Institute and the Co-Chairman, the Director of the Bureau of Agricultural Economics, Department of Agriculture and Natural Resources. Membership may come from government as well as private agencies directly or indirectly involved in marketing research.

(e) That the Philippine National FAO Committee be strengthened in terms of necessary financing to enable it to perform its assigned functions more effectively. It should act as a true liaison between FAO and the Philippine government.

COMMITTEE ON RESOLUTION

(Sgd.) Vicente U. Quintana
Chairman

(Sgd.) Honorio L. Ylizarde
Member

(Sgd.) Prescillano D. Evangelista
Member

(Sgd.) Jose B. Baclig
Member

(Sgd.) Benjamin S. Calayag
Member

(Sgd.) Ignacio V. Austria
Member

(Sgd.) Lilia H. Constantino
Member

(Sgd.) Angel G. Kanapi
Member

(Sgd.) Felix D. Enrile
Member

PART IV

REMARKS AND ADDRESSES

A. OPENING CEREMONIES

THE FIRST NATIONAL SEMINAR ON AGRICULTURAL MARKETING IN THE PHILIPPINES

Eugenio E. Cruz
Director of Plant Industry
Chairman, Organizing Committee
and Director of Seminar

Pursuant to the Resolution of the FAO Regional Conference held at Kuala Lumpur, Malaysia in 1962, the establishment of a National Seminar on Agricultural Marketing has today been realized. It is a joint undertaking between the Philippine Government and the Food and Agriculture Organization of the United Nations.

The purpose of this seminar is to provide in-service training on agricultural marketing to personnel of government and private agencies interested in the improvement of our economy in the Philippines.

This seminar was brought about after two meetings sought by Mr. F. A. Shah with Secretary Jose Y. Feliciano of the Department of Agriculture and Natural Resources.

The first meeting was held last November 1964 with Mr. F. A. Shah, Secretary Jose Y. Feliciano, Messrs. Mateo de Dios, Albino P. Varona, and Dimas A. Maulit of the RCA and DANR attending. It was during this meeting that Mr. Shah broached the idea of establishing a short-term national center on agricultural marketing patterned after that of the Malaysia Center. The importance and scope of such a center was explained to the Secretary and knowing fully well the impact that it would contribute to our program of increased agricultural production, the Secretary welcomed the idea.

On May 4, 1965 another meeting at the Filipinas Hotel was held with representatives from the Department of Agriculture and Natural Resources and the Bureaus under it like the Bureaus of Plant Industry, Animal Industry, and Agricultural Economics; the National Economic Council; Department of Commerce and Industry; Program Implementation Agency; U. P. College of Agriculture; Rice and Corn Administration; Agricultural Credit Administration; Central Cooperative Exchange, Inc.; Commission on Agricultural Productivity, etc.

It was during this meeting that final arrangements were made. An Organizing Committee was immediately created by Secretary Feliciano and I was called to head the Committee.

Before leaving for Bangkok, Thailand, Mr. Shah drew out a tentative plan of work which was referred to the Committee and which I later perfected.

Full powers were given to the Committee by the Secretary of Agriculture and Natural Resources with the issuance of Special Order No. 40, Series of 1965.

The first meeting of the Committee was held on May 13, 1965, followed by two other meetings on June 10, and August 5, 1965.

The plan of work was revised to suit the Philippine conditions. Subjects to be taken up were expanded to include those which were believed would be of interest to the Philippine Government agencies and private parties interested in the improvement of agricultural marketing system.

The center was renamed "National Seminar on Agricultural Marketing," considering its duration.

The site for the seminar was determined on the basis of the convenience of the participants, members of the committees and the accessibility of the place to transportation facilities. The WHO Building, because of its convenient site, was selected and approved by the Secretary of Agriculture and Natural Resources, as well as the Executive Office by the issuance of Memorandum Circular No. 126, Series of 1965, amending Memorandum Circular No. 123 of the same series, insofar as the place of the seminar was concerned.

In the meeting held with Mr. F. A. Shah on May 4, 1965 it was known that agencies like the UPCA, RCA, CAP, BAI, DANR, CCE, NEC, PIA, BC, Onion Growers, Livestock associations and other private agencies were expected to participate in this seminar. On recommendation of the Organizing Committee, participation was extended to include agencies like the ACCI, BPI, ACA and other organizations like the Federation of Rice and Corn Planters, CCE, DANR, RICOB, and Universities like Araneta and Mindanao Institute of Technology.

The seminar was given a wide publicity to encourage more participation.

Memorandum Circular No. 123, Series of 1965 was issued on May 31, 1965 by the Office of the President urging all agencies, government as well as private, to send participants to this seminar.

The seminar was organized barely from scratch without any initial appropriation. In the two meetings held by the Committee, particular attention was given to this item. An estimate was made and after considering the different items, the members agreed to charge the participants the corresponding conference fees to be borne by their respective agencies. This was approved by the Secretary of Agriculture and Natural Resources. Conference fees for each participant was authorized under Memorandum Circular No. 123, Series of 1965.

Thus, the "First National Seminar on Agricultural Marketing," a joint project of the Philippine Government and the Food and Agriculture Organization of the United Nations was established in the Philippines.

The participants of this seminar were selected and are fully qualified according to the standards set by the committee.

They are as follows:

	Name	Agency
1.	Abella, Domingo R.	National Cottage Industries Development Authority
2.	Austria, Ignacio V.	National Economic Council
3.	Baclig, Jose P.	Central Cooperative Exchange, Inc.
4.	Bandong, Francisco C.	Bureau of Animal Industry
5.	Calayag, Benjamin S.	Bureau of Agricultural Economics
6.	Clemente, Dominador, Jr.	Mindanao Institute of Technology
7.	Constantino, Lilia H.	Mindanao Development Authority
8.	Enrile, Felix D.	Bureau of Plant Industry
9.	Evangelista, Presciliano D.	Rice and Corn Board
10.	Gacusan, Epifanio C.	Bureau of Agricultural Economics
11.	Garrido, Artemio G.	Office of the Secretary of National Defense
12.	Gatdula, Pablo L.	Central Cooperative Exchange, Inc.
13.	Gracilla, Porfirio	Bureau of Commerce
14.	Guzman, Lucio S.	Central Cooperative Exchange, Inc.
15.	Joson, Ruperto L.	Rice and Corn Administration
16.	Kanapi, Angel G.	Armed Forces of the Philippines
17.	Lopez, Marciano B.	Philippine Sugar Institute
18.	Medina, Aristeo B.	National Cottage Industries Development Authority
19.	Montenegro, Amelita R.	Agricultural Credit Administration
20.	Pamatmat, Lolita R.	Bureau of Agricultural Economics
21.	Peredo, Benjamin D.	U.P. College of Agriculture
22.	Quintana, Vicente U.	Agricultural Credit and Cooperative Institute
23.	Recto, Aida E.	International Rice Research Institute
24.	Talon, Agripino M.	Rice and Corn Administration
25.	Umali, Juan L.	Bureau of Animal Industry
26.	Ventenilla, Felicitas S.	Agricultural Credit Administration
27.	Villapande, Mariano	Philippine Fisheries Commission
28.	Ylizarde, Honorio L.	Armed Forces of the Philippines

OPENING ADDRESS

F. A. Shah

FAO Regional Marketing Specialist
Asia and the Far East

I feel greatly pleased and honored to address this distinguished gathering which is celebrating the inauguration of the First National Seminar on Agricultural Marketing in the Philippines. This seminar, as some of you are aware, was conceived in November 1964, at the time when the Seventh FAO Regional Conference took place in Manila. In spite of his great responsibilities and pre-occupations as chairman of the conference, Mr. Feliciano very gladly agreed to find time to meet and discuss with me the desirability of organizing a seminar on agricultural marketing. During our discussions in the presence of a couple of other heads of departments concerned which took place over a breakfast in the Hotel Filipinas on the 14th of November 1964, Mr. Feliciano extended his blessings to the idea of organizing a marketing seminar. Originally it was intended to be held in the first half of this year, but owing to our commitments in some other countries it had to be postponed to September 7, 1965. It is indeed a matter of great satisfaction that today's ceremony marks the culmination of the joint efforts made by the energetic and enthusiastic members of the Organizing Committee appointed by Mr. Feliciano in May 1965 following a detailed discussion which took place over a breakfast meeting in the Hotel Filipinas on the 4th of May 1965, and the specialists of the Food and Agriculture Organization of the United Nations. The very presence of the Honorable Secretary of Agriculture and Natural Resources and other distinguished representatives of the various Government Bureaus and Departments at this occasion is a proof, if any is required, of the keen interest of the Government in improving the marketing systems of the country and thus improve the standard of living of the farmer. As Co-Director of this seminar it is my great privilege to extend a very warm welcome to all the participants and the local lecturers and sincerely hope that our discussions of the various marketing problems during the next three weeks will be fruitful and beneficial to all concerned.

You are aware that the economy of the Republic of the Philippines is basically agricultural and is going to remain so for a long time to come despite the industrialization programs undertaken by the Government. The overwhelming majority of the people depend upon agriculture for their livelihood. Agricultural products form over three-fourths of the total annual exports of the Republic. In order to meet the increasing demand for local consumption arising out of population "explosion", urbanization, improvement in the standard of living, etc. and for export to earn foreign exchange to procure capital goods for economic development the main problem is to increase agricultural production. With a view to achieve this objective, the simultaneous improvement in the marketing systems is essential as without enabling the farmer to obtain a remunerative price for his produce it is difficult to motivate him and secure his full cooperation in the implemention of the agricultural development programs.

This seminar is going to last for a period of three weeks, out of which it is proposed to devote about two weeks to delivering 23 lectures followed by discussions on various aspects of marketing and about one week to field exercises to try out the survey and research techniques for specific agricultural products. It is hoped that as a result, the participants will be better equipped with the knowledge of research techniques concerning some marketing problems which is so essential for improving the efficiency of the marketing systems. During the short period of this seminar it is not possible to find solutions to the various marketing problems, nevertheless it is believed that with the help of local specialists and a number of FAO experts equipped with wide and varied specialized experience would lead to crystalize the main problems of agricultural marketing in the Republic of the Philippines.

Before concluding my remarks, I would like to add that the Food and Agriculture Organization of the United Nations is always ready to assist the member government in providing technical advice, training, etc. in various fields of agriculture. In order to make full use of this assistance in a particular field such as marketing, it is necessary that the member governments should establish and strengthen a suitable organization in their own countries. It is a matter of satisfaction that the Department of Agriculture and Natural Resources is fully conscious of this need and has already taken steps to organize the office of Agricultural Marketing News Service under the control and general supervision of the Bureau of Agricultural Economics. Some other aspects of marketing, such as grades and standards, cooperative marketing and warehousing are taken care of by some other organizations. With a view to formulate a uniform policy on the improvement of various aspects of agricultural marketing, there is perhaps a need for the coordination of these efforts. We in the FAO would be very glad to offer whatever technical assistance is possible in undertaking the various marketing development projects. This seminar represents only a beginning and may be followed up by a few more in the future and ultimately lead to the establishment of some permanent training and research facilities.

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OPENING CEREMONY

Stig Andersen
FAO Country Representative

On behalf of Dr. B.R. Sen, Director-General of the Food and Agriculture Organization of the United Nations, and on my own behalf I should like to congratulate the Government of the Philippines and especially the Department of Agriculture and Natural Resources for sponsoring this First National Seminar on Agricultural Marketing. I believe that this is the first seminar of its kind to be held in the Philippines. I am certain that the participants in this seminar will benefit from the experience of the several Filipino specialists as well as international specialists and that they will, drawing upon this new knowledge, contribute to the acceleration of the pace in agricultural development.

The Food and Agriculture Organization of the United Nations attaches the greatest importance to training programs in the field of agricultural marketing. In the Regional Meeting held in New Delhi, India in 1959, the assembled marketing specialists from Asia concluded that there was a great need of training in this field. The ultimate aim may well be that each major country in the region should have a permanent National Research and Training Institute for Marketing, but in the meantime seminars and training centers such as this serve a very useful purpose. These views were reiterated by the Sixth FAO Regional Conference held in Kuala Lumpur in 1962, and again, in a technical meeting on Marketing Aspects in Implementing Price Policies held in New Delhi, India in February 1965. In these meetings the Government of the Philippines participated verv actively. The delegation to them included Mr. Esteban S. Piczon and Dr. Fabian A. Tiongson, respectively.

You may perhaps be aware that the FAO has been assisting several countries in the region in conducting such national seminars as this. Seminars have already been organized in Indonesia, Korea, Thailand, Singapore, Ceylon and Malaysia. This excellent work has been carried out under the wise encouragement and advice of Mr. F.A. Shah, the FAO Regional Marketing Specialist for Asia and the Far East, who is the Co-Director of this seminar. In this work, he has been guided by and in close cooperation with Dr. J.C. Abbott, Chief of Marketing Branch in FAO Headquarters. I am very happy to see that FAO has also given a very valuable contribution to this seminar by asking Messrs. Shah, Mittendorf and Arzadon to assist in it. Most important, however, is the excellent initiative taken in this seminar in the Philippines by Mr. Jose Y. Feliciano, the Honorable Secretary of Agriculture and Natural Resources. But I would like also to pay a very special tribute to one of the civil servants working under the Secretary, namely: Dir. Cruz, Director of the Bureau of Plant Industry. Director Cruz has become, I think, in many circles of the FAO, "the representative of efficiency in the extreme," whenever there is a question of organizing any kind of meetings, big and small, in the Philippines; the same goes in Rome Headquarters and in Bangkok. This has been done in this case too and with remarkable results that we can all see.

I would also like, on behalf of the FAO, to say thanks to our sister organization, the World Health Organization (WHO), which has been so kind enough as to give us this beautiful hall for this meeting.

Let me once again, express my congratulations to the Government of the Philippines for taking this excellent initiative and also for giving me this welcome opportunity to participate in the opening ceremony. I wish you all three weeks of fruitful work for the benefit of the agriculturists and people of the Philippines.

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COMPLEXITY AND CHALLENGE IN AGRICULTURE

Jose Y. Feliciano
Secretary, Department of Agriculture
and Natural Resources

I am very delighted to be here today, because I have been given the opportunity of participating in today's program of this seminar and of seeing so important a seminar become a reality. I do hope that in the next three weeks my duties will permit me to sit among you as an observer in some of the lectures, which I expect will be extremely interesting. As an insurance against the probability that will continue to have not much time of my own to be able to do this, I am requesting Director Cruz and Director Shah to furnish me a copy of every paper that will be read in this seminar.

In November 1964, the Food and Agriculture Organization (FAO) of the United Nations held in Manila its Seventh Regional Conference for Asia and the Far East. The conference focused attention on the Freedom-From-Hunger Campaign which the FAO has been conducting for some years now.

Addressing the conference in a speech which was read by the Secretary of Foreign Affairs, President Macapagal described the population and food situation as follows (and I shall quote rather extensively):

> "The world population is unabatedly increasing at a pace which has long alarmed scientists and laymen alike. x x x The advances in medical science and progress in education in general have undoubtedly decreased infant mortality rates and lengthened the life span of man, and while this has definitely contributed to man's general well being in a very real sense, in another sense, just as real, it has also contributed toward man's complex problem of supporting himself on this earth now and in the future.
>
> The production of food crops in adequate quantities is just one aspect of this problem. The quality of foodstuffs available should be improved, since it is obvious that malnutrition and diseases that feed and thrive on malnutrition can not be prevented by quantity of food alone.
>
> The seriousness of the problem is, perhaps, best summarized by the experts in making the observation that twenty years after an awareness of the problem began to generate a global effort to solve it, we still find that some 60 per cent of the people in the underdeveloped areas comprising some two-thirds of the world's population suffer from undernutrition and malnutrition or both, and that as much as half of the world's entire population are underfed and hungry.
>
> Indeed, the fight against hunger, disease, and poverty has been a great continuing struggle. In most countries in this region, food production output has generally increased in the aggregate but has failed to spectacularly rise and catch up with geometric increments

in consumption requirements which inevitably have come about because of population expansion. Even in the more advanced countries in other parts of the world, the reality of the overall struggle has caused scientists to question whether eventually man should seek the answer to his food problems on the land alone or, indeed, while he occupies himself in maximizing the utility of the soil, he must now intensively explore the great potentialities the sea can offer."

My friends, these rather eloquent observations of the President describe the food problem of a fast expanding world population and suggest the complexity and the magnitude of the task of achieving the kind of agricultural progress to solve the problem.

If we take our attention away from a general view of the world and set our eyes instead on the underdeveloped and developing countries, the problem becomes more emphasized.

Here in our country, which, according to economic observers, has graduated from an underdeveloped status and may, therefore, be classified as developing nation, the problem is familiarly complicated.

We are basically an agricultural economy. We are blessed with rich natural resources and with a people whose native abilities, if I must say so, hold great promise. But we are burdened by the pressure of a population that is growing at the rate of about 3.29 per cent, a rate which is one of the highest in the world today. Thus, while we have succeeded in increasing our annual output of some of our primary food crops, the gap between population and production remains unbridged and we have continued to rely partly on the importation of food commodities in order that we can meet our consumption requirements.

Let us cite some figures.

In the last ten years, we imported about $145 million worth of milk and dairy products and about $39 million worth of meat and meat products. Of rice, we have arranged to import this year a total of 595,000 metric tons, costing over $60 million. The need for importing other food items is evidenced by the operations of the National Marketing Corporation.

This situation, of course, should not be deplored. While it is an evidence of a tremendous and continuing problem, it is also indicative of the bright future, from the standpoint of need, for agriculture and the food industries.

It seems to be no cause for alarm because we are fortunately able to draw from the other sectors of our agricultural economy, enough foreign exchange to make these importations possible. Nevertheless, there is no doubt that we should not be complacent about the situation and that we should continue to strive with a great sense of urgency toward self-sufficiency in as many of the food items which we need and which we have the potential to produce on a comparatively economic basis. The achievement of this objective would mean not only the saving of precious foreign exchange which would then be available for use in the acquisition of capital goods that would boost our productivity. It would also mean the creation, through more productive investments, of more employment opportunities and enabling more of our people to raise their income and levels of living.

A cursory analysis of the activities of our government in the field of agricultural development would reveal that such activities have centered on certain areas. These areas are: research, extension and training, production and marketing.

In research, the government continues to place its hopes both on government and private research organizations. In this area of activity we find such agencies as the Bureau of Plant Industry, the Bureau of Animal Industry, the various agricultural colleges, the Dairy Training and Research Institute, the International Rice Research Institute and other institutions collaborating in the attack on specific problems of agriculture.

In extension and training, these institutions also conduct their respective programs, but the task of turning out agricultural technicians, researchers, teachers and managers is, of course, mainly the responsibility of our agricultural institutions, while the task of extending useful knowledge to our farmers is mainly the responsibility of the Commission on Agricultural Productivity.

Through extension work, our government hopes to prime and boost production efforts, the effectiveness of which is depending upon the receptiveness and ability of our producers as well as the efficiency of our extension workers.

Production, as you all know, is not the end of the process. The products must be harvested from the fields and, through a multi-stage procedure, brought to the ultimate consumers. Thus, there is need for the farmers and/or the marketers to acquire better marketing skills, and one of the ways of achieving this, of course, is the training of more and more persons in the field of marketing.

Although it might be argued that the present knowledge in agriculture has not been fully utilized as yet, research work, is nevertheless, imperative because present knowledge in any field of endeavor must be replenished, revised, or expanded as a necessary ingredient of progress.

There should be a continuous process to translate present and new knowledge into practices because the value of knowledge is in its utilization and, therefore, extension work is necessary and more and more people should be trained to take leadership in the utilization of such knowledge.

The process of production itself must be developed so that maximum output could be obtained at least cost.

Marketing would have the same objective. The products must be transported, processed, graded, packed, and sold to the consumers so that the optimum profits would be available to the producers, the processors, and the merchants, and the need of the consumers for the products can be met at levels of quality and price that would be reasonable and acceptable to them.

That, probably, is a fairly clear and simple way of stating the objectives of research, extension and training, production and marketing.

But when we begin to grapple with the question of how these objectives might be achieved in the most expeditious and economical manner, we begin to be faced with innumerable requirements many of which seem at once to be farther from our reach, not only because they are in certain cases beyond what our immediate resources can afford but also because many of them involve variables which are not capable of being absolutely controlled. Many of them, in fact, involve rather radical changes in our social and economic attitudes and institutions, changes which take years and years to evolve and occur.

At this juncture, I am reminded by a statement which I read yesterday which Mr. Erven Long, the Director of the Rural Development Service of the Office of Technical Cooperation and Research of AID made in a paper entitled "Institutional Factors Limiting Progress in the Less Developed Countries."[1] He said that "countries wishing to jump into the stream of economic progress must be willing fundamentally to alter their institutional structures."

When you examine the institutional factors in our country which, in the light of the statement of Mr. Long, are serving as impediments to agricultural progress, the complex picture stares us in the face.

Our land tenure system is considered antiquated and does not lend itself to the encouragement of greater production. We have embarked on land reform—a bold program which promises great results but which, necessarily, will take many years to implement completely.

Our credit system has chained our farmers to a life of debt which, probably, is almost always obtained at high rates of interest. Our anti-usury law, the nationalization laws, the land reform law itself, and other statutes are gradually correcting this system.

Our marketing systems have been traditionally unable, as might be expected, to provide desirable incentives to our farmers to produce more and better quality products. Particularly in the food crops, where the market demand is usually larger than our output, standardization is poorly implemented and market information which could be a useful guide to producers is inadequate. Probably, the development of export markets and/or the establishment of effective organizations of producers or marketers will eventually force the establishment of better quality standard and more effective price information systems.

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[1] See Albert H. Moseman, "Agricultural Sciences for Developing Nations," American Association for the Advancement of Science, 1964, p. 6.

Our family unity and cohesiveness, which in a sense is one of our assets that make for social stability, is, in another sense, somewhat deterrent to agricultural progress. We are inclined to the formation of family organizations, which often stifle the initiative of the younger members of the family to assume responsible positions. We are learning, though slowly, that the family has its own limitations both in number and talent, and that at some point a family enterprise to be more progressive, must take in non-family members to hold positions of responsibility in the organization. The question remains, however—and it will probably remain for a long time yet—whether the change should be a compelling result of progress or should be sought in order to attain progress.

There is also the question of the readiness of our people, particularly those in the rural areas to imbibe knowledge that will help them on the farm. The degree of that readiness naturally affects to a large extent the sophistication, intensiveness and extensiveness of the services—such as research extension and education—which our government should continue to provide. Education, of course, is a solution to the problem of reducing the overhead for such services, but education is a slow process.

Our agricultural colleges have for many years emphasized basic training and research. Now, because of more enlightened leadership, these colleges are beginning to change their orientation and even the research work they presently do. They are more readily inclined toward the solution of problems directly related to our needs for developing agriculture.

My friends, these are some of the institutional problems and some of the solutions which we are trying and which we hope can carry us into the stream of economic progress in agriculture.

The complexity of these solutions which require sustained effort and money and time as well, is actually the challenge in agriculture.

In attempting to meet this challenge, two basic ingredients, to my mind, are imperative.

One is a sense of history in our efforts. No country has broken the institutional barriers to agricultural progress overnight. It took the United States, for instance, about a hundred years to shift some 63 per cent of its labor force from agriculture to industry and other occupations through the mechanization and/or commercialization of agriculture.

The second ingredient is trained people. Change and progress can be effected only by trained people, and it is in this regard that this seminar takes on its significance.

We need skilled leadership not only in research, but also in the other processess—extension, education, production and marketing—which, like links of a chain, are involved in feeding our growing population.

Finally, may I express the hope that this seminar will be most productive to you all, and that it will prove to be one real step toward the better understanding of the complexity, and meeting the ever continuing challenge, of agricultural progress.

I thank you.

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B. CLOSING CEREMONIES

SHORT TALK

H. J. Mittendorf
Marketing Branch
FAO, Rome

I am very pleased to address this special meeting at the closing ceremony of the First National Seminar on Agricultural Marketing, since this gives me the opportunity to review briefly the work which has been carried out during the past three weeks.

Agricultural marketing is rather a wide field and covers all the activities necessary to move agricultural products from the producer to the consumer and which includes processing the products into forms acceptable to the consumer. These functions of marketing, such as assembling, storage, transport, processing, packaging and distribution are absorbing more than half, perhaps two-thirds, or even more of the consumer's dollar. We are also surprised to find that more money is spent for marketing services than for the whole agricultural production and the question is raised why such a large amount of money is absorbed by marketing cost and margins. Mistakenly, we will sometimes consider that a large part of this margin forms the pocket of the middlemen. Only if we study in detail as we did during the last weeks, the marketing of specific products and follow them from the producer to the consumer do we get an idea of the complexity and interrelationships of the different marketing functions. The complexity and the general underestimation of the importance of marketing is generally the main reason why many are prejudiced against persons involved in marketing, widely known as middlemen.

I think this seminar has contributed in particular to better understanding of marketing and its contribution to the economy as a whole. The demand for marketing services will continuously grow with the general economic development of the country. The rate of organization associated with industrialization and the rising standards of living require more investments in transport, storage and processing facilities. But, not only more facilities are needed, also more qualified personnel to handle efficiently the new marketing system. Unfortunately, the need for investments and know-how is neglected and there are many examples in other countries where modern marketing facilities are not used because of the lack of qualified personnel to run the business efficiently.

In view of this experience in other parts of the world, we should be particularly grateful for the initiative of the government of the Philippines for organizing this seminar. During the last three weeks we worked together on a number of subjects. We discussed the technical and economic aspects of packaging, transport and storage and handling of agricultural products, the problems involved in agricultural pricing, price policy and price stabilization. We reviewed the movement of agricultural cooperatives and their particular problems in organization. We discussed the role of credit, the organization and operation of marketing work and finally the need for efficient training and research extension program in agricultural marketing.

The two-week discussion period was not sufficient for us to study all the problems involved in the various aspects of agricultural marketing. The last week for field studies gave us an excellent opportunity to study in detail problems involved in marketing of fruits and vegetables, eggs and poultry, paddy and rice, copra and abaca. In spite of the short time, I think all of us became aware of the close relationship between agricultural development and an efficient marketing system in providing more incentives to increase agricultural production. We tried to identify the main factors regarding efficient marketing, the problems involved and the solutions that may remedy the situation.

In this connection, we recognized the importance of an effective research, training and extension program. As any successful therapy requires a thorough diagnosis, so any marketing improvement program requires first a thorough study on the shortcomings of agricultural marketing. Marketing research, training and practical demonstration properly coordinated and oriented to the needs of the country are the three elements in an agricultural marketing development program.

We have noticed with great interest the recommendations of this distinguished group of delegates to establish a permanent institute for research, training and demonstration in agricultural marketing. I think this is a very wise suggestion. Similar institutes assisted by the United Nations Special Fund were established in recent years in other countries and are contributing greatly to better marketing and faster agricultural development. If the government of the Philippines would find it desirable to establish a similar institute here in this country, we would be happy to render all our assistance.

I would like to take this opportunity to thank all those who attended this seminar and participated so actively in the discussion. Time has passed so quickly and I wish we could continue our work which has developed so successfully. It was a great pleasure and satisfaction for me to attend this seminar and to discuss with you marketing problems of your country. From the keen interest you have taken in this seminar and the high standard of discussions we had, I am fully convinced that you will do your best to contribute to the solution of the marketing problems. I do not consider this as the end of our work, but only the beginning of the future closer cooperations with you. If we can be of any assistance in this respect, please let me know.

Finally, I would like to express my sincerest thanks to all those persons who organized so efficiently this seminar. Our thanks are particularly directed to Director Cruz and his staff who have done a wonderful job. I wish we could benefit from your organizational talent some time in other countries.

Thank you.

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A BRIEF EVALUATION

F. A. Shah
FAO Regional Marketing Specialist
Asia and the Far East

My colleague Mr. Mittendorf, has already given you a brief evaluation of the marketing seminar. I may not go on the same ground but I would like to supplement it with my own observations about the work done during this period.

Three weeks ago, I had the pleasure and honor to extend a warm welcome to all the participants in this First National Seminar on Agricultural Marketing in the Philippines. Today, I am very pleased to extend my felicitations to all the participants, the organizing committee and the government of the Philippines for the successful conclusion. You are aware that I have been closely associated with the initiation, planning and advocation of this seminar. I am grateful to the Honorable Jose Y. Feliciano, Secretary of the Department of Agriculture and Natural Resources for the encouragement he provided right from the time I discussed this project with him in November of 1964.

My grateful thanks are due alone to the organizing committee, in particular to Director Cruz, who has been mainly responsible for the efficient organization of this seminar. I am very glad to remark that the actual performance during the last three weeks exceeded my expectation. You are fortunate to have 28 capable and experienced participants representing 19 agencies. They have shown a keen interest in exchanging ideas, knowledge and experience in various marketing problems. It was a general feeling shared by all of us that the time at our disposal was rather short as we frequently crossed the limit and because of the coffee and luncheon breaks. The field exercises provided in this seminar was broadened by adding the study of some export crops particularly copra and abaca.

I would like to endorse the views of Mr. Mittendorf that we will be too pleased to assist the government of the Philippines in providing technical assistance, training, etc., whenever requested. As you know, the office of the regional marketing specialist is located in Bangkok, Thailand. We will be too glad to render any assistance at a short notice, by paying a visit to this country and providing any other assistance in this field by means of correspondence. The agencies concerned with marketing should feel free to write to us whenever necessary.

Before concluding my remark, I would like to place on record my sincere thanks to the government of the Philippines for the hospitality and facilities extended to us during our three-week stay in Manila. I feel greatly indebted to Secretary Feliciano for the personal interest he has given in organizing this seminar. Thanks and gratitude once more to Director Cruz for so efficiently organizing this seminar. We appreciate very much the assistance given by the local lecturers; namely, Mr. Filemon T. Berba, Dr. Pablo N. Mabbun, Mr. Eugenio V. Mendoza, Mr. Remedios E. Racela, Dr. Orlando J. Sacay and Dr. Fabian A. Tiongson.

Grateful thanks are also due to the various sub-committees including finance, public relations and publicity, secretarial services, general services, general utility men, typists and receptionists. I appreciate very much the hard work put in by the members of the secretarial staff and their efficiency in making available a large number of documents at the proper time, everyday.

I acknowledge with gratitude the assistance provided by the WHO for making available the use of the conference hall and its facilities which contributed greatly to the successful conclusion of this seminar.

Wishing you all success in your endeavors to improve the marketing systems, I conclude my remarks.

Thank you

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SHORT COMMENTARY

Vicente U. Quintana
President
Philippine Agricultural Marketing Association
(PAMA)

I don't intend to make a speech for my part is only a commentary, but be assured that whatever I will say here is with deepest sincerity.

To me it seems unbelievable that three weeks have passed and the inevitable day of parting has now come. Nevertheless, I would say with satisfaction that those three weeks we spent in this seminar have been indeed very well spent. During this period, we have worked hard and we have religiously dedicated ourselves to the study of the different aspects of the commercialization and industrialization of agricultural products, which I believe is very necessary for a rapid agricultural development.

Based on the lectures and working papers presented, we have spent ample time to discuss the various marketing functions and services, the institutional arrangements, some marketing policies related to a few agricultural products, and the general as well as specific problems of moving the products from the farmers to the ultimate consumers.

In research, most of the participants found the one-week field exercises to be useful, informative, challenging and interesting. With all the activities that we have had, we have surely enriched our experiences; we have developed a positive outlook; we have found new friends and we have also identified some areas of activities where the participants could possibly work together.

In our zealousness and enthusiasm to participate and contribute our views and experiences to the crystalization of ideas being deliberated we have at times entered into discussion and disagreement with one another but as a participant, I was not a bit disturbed because this is a necessary part of a gathering such as this one; it is one of the basic elements of a healthy and active participation in a democratic society like ours. With the proper guidance that we had, we always ended our daily sessions with a feeling of satisfaction.

After a closer and thorough study of the structures, organizations and problems of agricultural marketing in this country, the participants, assembled in a plenary session, passed a number of resolutions which are considered to be very essential to the development of an efficient agricultural marketing system. To mention a few, the participants recommended the following:

> Firstly, an institute should be established within the primary functions of training, research, and demonstration. Technical as well as financial support of the Food and Agriculture Organization (FAO) and other international bodies, and privately endowed agencies here and abroad should be solicited to carry out the program. Preferably, the institute should be attached to an academic institution.

Secondly, that FAO should be requested to provide a marketing expert to advise and assist the Philippine government in the formulation of marketing policies, in conducting research, in training local officials, and to assist in the planning for the establishment of the proposed institute.

Thirdly, that a National Agricultural Marketing Research Committee should be created to coordinate all activities in the field of agricultural marketing. The Chairman of the Committee should be the Director of the proposed Institute and the Co-Chairman, the Director of the Bureau of Agricultural Economics, DANR. Membership may come from government as well as private agencies involved in marketing research.

Fourthly, that the Philippine National FAO Committee should be strengthened in terms of increased appropriation to enable it to perform its assigned functions more effectively. It should act as a true liaison between FAO and the Philippine government.

At this point, allow me to say a few words about the organization of the seminar. Every participant will agree with me that it was excellent. The seminar progressed smoothly and to the satisfaction of everyone. This is simply due to excellent planning and effective organization. Without fear of any contradiction, I would say that the seminar is a great success. This success should continue in our respective offices through a closer and constant cooperation for the betterment of the farmers' livelihood and the economic prosperity of this country. This cooperation can be achieved through the Philippine Agricultural Marketing Association which is a by-product of this seminar.

On behalf of the 28 participants, I wish to extend my most profound gratitude to all those who in one way or another helped to make this "First National Seminar on Agricultural Marketing" possible and significantly successful.

A special word of appreciation and thanks is due to Secretary Jose Y. Feliciano for his wholehearted support and interest in the seminar; to Director Eugenio E. Cruz for his effective leadership and overflowing enthusiasm in making this seminar possible and in bringing it to a successful conclusion; to the FAO Director General for making available to us the services of Messrs. Mittendorf, and Arzadon; to Mr. Shah for his initiative in broaching this idea of holding a seminar and for his technical contribution as a lecturer. Thanks is also due to all the lecturers for their well-prepared papers.

To Miss Josefa Mangubat and her financial staff; to Mr. Zosimo L. Falcis and his public relations and publicity men; to Mr. Honesto Mercado and all the members of the Secretariat; to the receptionists and the general utility men, we extend our special thanks for the splendid job you all performed in this seminar.

For the beautiful musical numbers, I would like to thank the Philippine Navy Band and the ACA Choral and Cultural Group.

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SOME IMPERATIVES OF ECONOMIC DEVELOPMENT

Armand V. Fabella
Director
Program Implementation Agency

I am happy to be here today to share with you my thoughts on this occasion of great expectations. I would like first to congratulate the organizers of this First National Seminar on Agricultural Marketing, for the splendid and smooth manner it has been carried out. The assistance of the United Nations is greatly appreciated and I would like to single out Mr. F. A. Shah of the FAO Regional Office, who, I am told, was mainly responsible for stirring the seminar to its very successful conclusion.

The field of agricultural marketing has so far not been accorded the importance that it deserves in our country. The present agricultural marketing practices are essentially the same as they were 30 or 40 years ago. Why has this static situation persisted for so long?

I would not presume to know the answer to this nagging question. You, the participants in this seminar, should be in a much better position to explain why this has been so. However, I like to believe that the apparent neglect of this very important field has been dictated by force of circumstances that have hugged the spotlight away from agricultural marketing.

Let me elaborate on this point. It is too well known that Philippine agriculture is today suffering from the twin maladies of insufficient production and low productivity. Majority of our farm producers are subsistence farmers whose production activities are almost always carried out without due consideration of the market.

I like to think that the present inefficiencies in the agricultural marketing system in our country is the direct result of the nature of most of our farming activities. This is especially true in the case of food commodities such as fruits and vegetables, meat and even rice and corn. The farming activities of a majority of our farmers is not directed to the needs of a market economy. Since most of our farms produce only for home consumption, the volume of agricultural commodities passing through the regular channels of trade has not been large. Consequently, the marketing functions of assembling, processing and distribution have been carried out with a minimum of working capital and facilities except in the case of our major export commodities like sugar, copra, coconut oil and abaca.

Where before the need to improve our performance in the field of agricultural marketing was not so clear-cut and keenly felt, the pressures and requirements of a developing economy are now spotlighting our inadequacies and shortcomings in this field. Ours is a country on the move, and its growth has been steady and satisfactory.

But we are facing a big problem of a rather pressing if not urgent in nature. This problem is the relatively poor performance of the agricultural sector, especially in the production of food commodities. The trend of food production in the last few years has been quite disturbing. Our population is reported to be growing at a rate of about 3.2 per cent per year. This in effect means that something like a million additional mouths to feed are added to our population each year. If our agricultural productivity is not significantly raised, we will continue to require large amounts of foreign exchange for the importation of food items like rice, meat, milk and fish to augment our inadequate production.

This is the tragic legacy which has been handed to us by our previous colonizers. Since 1946, our agricultural sector has failed to play its part in supplying the food and raw material requirements of our urban industrial sector. This failure of the agricultural sector to meet the requirements of our expanding industrial sector has greatly inhibited the progress of our efforts towards industrialization.

Why is this so? You are aware, of course, that the average Filipino family spends more than 50 per cent of its total expenditures on food. Since food expenditures bulk so large in the country's market basket, an actual or imminent shortage will have tremendous effects on the domestic price level. It is sad to say here that the agricultural sector has not quite lived up to its major role in the national scheme for economic growth and development.

Lest I be misunderstood, I want to make it clear that I am not blaming the agricultural sector for its past failures to meet the challenge of economic development.

I would suggest, instead, that past efforts had sorely failed to put in proper perspective the imperatives for more rapid and self-sustaining growth and development. If we are now importing larger and larger quantities of rice, it is because past administrations failed to lay the requisite foundation for agricultural development which is the cornerstone of self-sustaining industrialization.

We at the Program Implementation Agency strongly subscribe to the view that our country cannot attain the highly cherished goal of industrialization unless we can make our agricultural sector responsive to the challenge of industrial development. The agricultural sector must provide the economic surplus in terms of food and raw materials required by our urban industrial population. To go at a faster rate would be to invite the dangers of dislocation.

While minimal price increases are unavoidable in a growing economy, this administration believes that monetary stability must go hand in hand with the attainment of a higher rate of economic growth. When inflation spreads its ugly tentacles within the economy, only the property owners and stockholders are benefited. An administration strongly committed to the uplift of the common man cannot, and would never countenance the attainment of a higher rate of economic growth through inflationary means at the expense of the poor and the downtrodden.

Recognizing the crucial role of agriculture in economic development, the Program Implementation Agency has given the highest priority to the requirements of the agricultural sector for the attainment of greater agricultural production and higher productivity.

We have, for instance, pinpointed the abject inadequacy of irrigation facilities as the primary cause of our historical inability to produce enough food for our people. Consequently, we have been laying the foundation for a greatly expanded program of irrigation construction and development.

Very recently, a working group headed by the Program Implementation Agency completed a 247-page report on irrigation which will subsequently serve as the official document on irrigation development in our country. This document is actually a proposal for financial assistance for the irrigation program of the Philippines. It is being submitted to the World Bank for its consideration. We are very optimistic that we will be able to avail soon of the assistance this agency provides.

We feel, however, that only a multi-pronged approach will enable us to bring about the desired changes in order that we can develop our agriculture into a strong and viable sector and support a more rapid and self-sustaining industrial development.

The provision of irrigation facilities alone will not be sufficient in bringing about higher agricultural productivity. There is too much duplication and overlapping of functions among our agricultural agencies. Our country cannot afford the dubious luxury of such wasteful expenditure.

Agricultural development requires a pool of trained manpower in all fields of agricultural services. We need highly trained and dedicated men and women in the fields of teaching, research and extension. It is precisely because of this strongly felt need for skilled manpower that this national seminar on agricultural marketing was initiated.

If I seem to have digressed into the field of agricultural production, it is because we cannot fruitfully talk about marketing if we have nothing to sell. It is not as if agricultural marketing is unimportant.

As an economy develops, the marketing machinery becomes more elaborate and complicated. Thus, highly trained men and women, like the participants in this seminar, must be prepared to assume the duties and responsibilities which will inevitably have to be discharged once our farm production is oriented to a market economy.

I will go further into the importance of, or the requirements for an efficient agricultural marketing services. You, as participants of this seminar, should now be more conversant with this aspect of agricultural development. Instead, I will briefly assay into the realm of international trade.

I would presume that you are all conversant with the workings of our international trade. Even as we continue to diversify our export commodities and to seek new markets for them, the United States remains our ranking trading partner. Yet, even as this partnership endures, we must never forget that our special trade relations with the United States under the Laurel-Langley Agreement is inexorably coming to a close. I have on many occasions warned against the dangers of being caught unprepared for that time when preferential trade with the United States will end. If we are to grow and take our rightful place among the more economically advanced countries of the world, preferential trade with our former mother trading country must sooner or later come to an end.

The problems of most underdeveloped countries are quite similar in many ways. For instance, it is a generally accepted phenomenon that the terms of trade usually go against the underdeveloped countries.

Yet, we find all sorts of barriers imposed by the economically advanced countries against the processed or semi-processed exports of developing countries. We of the developing countries are being impaled on the horns of a dilemma. If, on the other hand, we try to export processed or semi-processed commodities, we find the doors of the developed countries shut against the entry of our exports through the imposition of high tariffs, fixed quotas or other discriminatory trade practices.

The United Nations Committee on Trade and Development (UNCTAD) at its first meeting held in Geneva last year offered some ray of hope to the developing countries like our own. But while the developed countries may subscribe to the guiding principles enunciated by this committee, they have been disappointingly slow in giving substance to their promise of help.

It is my belief that we must expand the base of our export industry and continue seeking new outlets for our export commodities. While we continue to hope that the more advanced countries of the world will prove true to their promises of granting more liberal trade arrangements to developing countries, we cannot afford to be complacent. We must always be on the alert for opportunities to expand volume, value and composition of our exports. While it is true that we can depend on foreign lending institutions like the World Bank and the Export-Import Bank to provide some of our foreign exchange requirements for the importation of capital goods, the amount of foreign exchange we can get from these sources is only but a small fraction of our requirements. We must export if we are to provide the foreign exchange requirements of our program of industrial development.

The crucial problem facing most developing countries like our own is the fact that while we are heavily dependent on imported supplies of machinery and other capital goods which are strategic for lifting the levels of capital formation for economic growth, we also find that we have to import more and more consumer goods. Since prices of our exports have tended to sag and relatively subject to wide fluctuatio .s while our imports have been edging up and less subject to price changes, we find our balance of trade going against us.

We have, therefore, been placing priority to the production of food commodities and other wage goods by way of reducing the gap in our international trade. I think this is the most logical step we can take because we have the latent capacity to produce most of our food requirements.

It is unfortunate, however, that the food problem has always been dragged into the political arena. We should not forget that development, by its very nature, takes time. We have the foundations for agricultural and economic development now; it will be the future generation which will reap the benefits. Our reward will be the feeling of satisfaction that we have done our part in the task of nation-building.

It is the small pieces of brick laid painstakingly which build a strong and solid foundation of a home. So, it is with economic development. It is not the mere presence of a steel plant nor that of an atomic reactor which indicate real and significant development. It is rather the metamorphosis of the rural people from their lethargy and indifference, or if, I may say, from their fatalistic "bahala na" — God will provide — attitude to that of a cautious if expectant acceptance of the more profitable but more demanding market economy. This is the more meaningful indicator of social and economic change.

We in the cities and towns often tend to forget that development requires the active participation of all our people. There is always the need, of course, to start with what economists like to call "leading sectors".

Perhaps we can start, or start again with agriculture as a leading sector.

If we can only tap our rich resources, we would not have to spend our scarce foreign exchange on imports of meat, milk, fish and rice. When we become self-sufficient in food, then we will be in a position to import more of the capital goods needed by the industrial sector.

But we must start with our agricultural sector where majority of our people live and make a living. It is not true, as many of our leaders seem to believe, that an agrarian economy is necessarily a poor economy. Take a backward look at Japan of 50 years ago. Of the United States of America some 50-60 years back or even of Taiwan today. These countries built a strong and progressive agriculture as the starting point of their industrial growth and development.

Steady and self-sustaining growth cannot be based on the simple processing of imported raw materials like what we are presently doing in the field of cotton textile manufacturing, wheat flour milling or filled milk canning.

I strongly believe that our industrialization will have to depend more on the processing of indigenous raw materials. I have in mind here the establishment of domestic industries like a "coco-chemical" complex, pulp and paper manufacturing, tobacco manufacturing, fish canning, soybean processing, meat processing and other related agro-industrial enterprises with a reliable domestic base. The establishment of two integrated steel mills will, of course, greatly hasten the development of a machine-tools industry to service the needs of our manufacturing industries.

When these industries shall have been established, the need for a more efficient marketing system will come to the fore. That is why even now, the government is concentrating its capital resources to the building up of our infrastructure facilities such as roads and bridges, ports and harbors, power and water.

In a market economy, transportation becomes a major factor at the start of the assembling phase and is important throughout all other phases of marketing such as processing and distribution. An efficient transportation system can greatly facilitate the flow of consumer goods and raw materials from the farm or factory to the ultimate consumers and is, therefore, an effective means of reducing costs to both the producers and consumers.

If agriculture is the foundation for self-sustaining industrialization, it is the adequacy of a country's infrastructure facilities which ultimately act as the catalyst for private investment. The Government has long recognized that economic development requires an enduring partnership between the public and the private sectors of the economy and is, therefore, now taking the lead in promoting the growth of this partnership.

Under the Five-Year Program of Socio-Economic Development, the Government is committed to provide the infrastructure facilities needed by agriculture and industry. We have tried to live up to this covenant, but the financial resources of the government have not been adequate to meet all the requirements of the program. It is unfortunate that the Senate failed to enact the necessary tax measures which would have provided us new sources of revenue to meet the considerable capital outlays required for development. It is ironical that the Senate has chosen to be an unwilling partner in the task of nation-building. I would like to suggest that the task of nation-building demands a high degree of statesmanship from our leaders. A nation cannot remain blind to the requirements of economic development. If partisan politics continues to blunt our determination to forge ahead, then the future of our country will remain clouded with bleak uncertainty.

I cannot believe that our people will continue to accept this impasse without forfeiting our great chance to lay the foundation for a more rapid and self-sustaining industrial development. Neither can I believe that our people will remain indifferent to the obstructionism of the Senate. Let it not be said of our generation that we failed to establish the foundation for a greater and brighter future for our children.

I believe that we are capable of meeting the challenge of the future. I believe that with citizens like the participants in this seminar, we shall be able to transcend and overcome the barriers that are being placed across our road to economic maturity. We shall overcome these barriers because our cause is right. Is there still a better or more righteous cause that the cause for the economic emancipation of our people from centuries of poverty and want?

The imperatives of economic development are many and varied. I have tried to outline some of them here.

Before I close, I would like to commend you, the participants in this seminar, for your avid interest and great determination to improve yourselves. I am sure that the seminar has broadened your perspective not only in the sphere of agricultural marketing but also in your chosen career as public servants.

May you go back to your respective offices with a fresher outlook towards your job and with a stronger determination to contribute your best efforts to our common task of nation building.

Thank you.

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APPENDIX

A. LIST OF SEMINAR PARTICIPANTS

1. Mr. Domingo R. Abella	—Private Secretary II National Cottage Industries Development Authority
2. Dr. Ignacio V. Austria	—Actg. Asst. Chief National Planner Agricultural Resources Branch Office of National Planning National Economic Council
3. Mr. Jose B. Baclig	—Head, Trading Department Central Cooperative Exchange, Inc.
4. Mr. Francisco C. Bandong	—Senior Livestock-Poultry Technologist & In-Charge, Alabang Poultry Station Bureau of Animal Industry
5. Mr. Benjamin S. Calayag	—Statistician II Bureau of Agricultural Economics Department of Agriculture and Natural Resources
6. Mr. Dominador Clemente Jr.	—Asst. Instructor in Agricultural Economics Mindanao Institute of Technology
7. Mrs. Lilia H. Constantino	—Agricultural Planner Mindanao Development Authority
8. Mr. Felix D. Enrile	—Supervising Agronomist & In-Charge, Certified Seed Procurement & Distribution Unit Production Division Bureau of Plant Industry
9. Mr. Presciliano D. Evangelista	—Actg. Chief, Planning and Programming Division Rice and Corn Board
10. Mr. Epifanio C. Gacusan	—Statistician I Bureau of Agricultural Economics Department of Agriculture and Natural Resources
11. Capt. Artemio G. Garrido	—Adm O & Asst. Mgmt. O Office of the Secretary of National Defense
12. Mr. Pablo L. Gatdula	—Sales Supervisor Central Cooperative Exchange, Inc.
13. Mr. Porfirio Gracilla	—Supervising Commercial Agent Marketing Division Bureau of Commerce
14. Mr. Lucio S. Guzman	—Manager and Member, Board of Directors Central Cooperative Exchange, Inc.

15. Mr. Ruperto L. Joson —Senior Executive Assistant II
Rice and Corn Administration

16. Capt. Angel G. Kanapi —Chief, Morale & Welfare Section
JI Division, GHQ
Armed Forces of the Philippines

17. Mr. Marciano B. Lopez —Sugar Research Supervisor
Department of Economics & Statistics
Philippine Sugar Institute

18. Mr. Aristeo B. Medina —Supply Officer III (Project Supervisor)
National Cottage Industries Development Authority

19. Mrs. Amelita R. Montenegro —Senior Economist
Agricultural Credit Administration

20. Mrs. Lolita R. Pamatmat —Agricultural Economist
Bureau of Agricultural Economics
Department of Agriculture and Natural Resources

21. Mr. Benjamin D. Peredo —Research Instructor
Dept. of Agricultural Economics
College of Agriculture
University of the Philippines

22. Dr. Vicente U. Quintana —Assistant Professor
Agricultural Credit & Cooperative Institute
College of Agriculture
University of the Philippines

23. Miss Aida E. Recto —Research Instructor
Dept. of Agricultural Economics
College of Agriculture
University of the Philippines

24. Mr. Agripino M. Talon —Senior Statistician
Rice and Corn Administration

25. Dr. Juan L. Umali —Asst. Chief, Livestock & Poultry Propagation Division
Bureau of Animal Industry

26. Mrs. Felicitas S. Ventenilla —Cooperative Management Analyst
Agricultural Credit Administration

27. Mr. Mariano Villapando —Senior Market Analyst
Market Assistance Section
Philippine Fisheries Commission

28. Mr. Honorio L. Ylizarde —Farm Administrator
Genio Edcor Farm
Headquarters IV MA-/ID
Cagayan de Oro

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B. LIST OF STAFF AND LECTURERS

1. **Staff:**

Dir. Eugenio E. Cruz (Director of Seminar)	—Director, Bureau of Plant Industry Manila
Mr. F. A. Shah (Co-Director of Seminar)	—Regional Marketing Specialist for Asia and the Far East, FAO, Bangkok, Thailand

2. **Lecturers:**

Mr. H. J. Mittendorf	—Marketing Branch FAO, Rome
Mr. B. B. Arzadon	—ECAFE/FAO Agriculture Division Bangkok, Thailand
Mr. Filemon T. Berba	—Consultant, Management Service Division Sycip, Gorres, Velayo & Co. Manila
Dr. Pablo N. Mabbun	—Economist & Chairman of Livelihood & Coordinator of Research Philippine Rural Reconstruction Movement San Leonardo, Nueva Ecija
Gen. Mgr. Eugenio V. Mendoza	—General Manager Central Cooperative Exchange, Inc. Mandaluyong, Rizal
Mr. Remedios E. Racela	—Officer In-charge Bureau of Standards, Manila
Dr. Orlando J. Sacay	—Director, Agriculture Division Program Implementation Agency Arlegui, Quiapo, Manila
Dr. Fabian A. Tiongson	—Assistant Professor Dept. of Agricultural Economics College of Agriculture University of the Philippines Los Baños, Laguna

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C. LIST OF COMMITTEE MEMBERS

1. **Organizing Committee:**

Dir. Eugenio E. Cruz Bureau of Plant Industry	—Chairman
Dr. Dioscoro L. Umali U. P. College of Agriculture	—Vice Chairman
Gen. Mgr. Eugenio V. Mendoza Central Cooperative Exchange, Inc.	—Member
Dr. Orlando J. Sacay Program Implementation Agency	—Member
Dir. Eliseo Quirino Bureau of Commerce	—Member
Admr. Amado Lansang Agricultural Credit Administration	—Member
Mr. Alfonso B. Castro National Economic Council	—Member
Mr. Albino P. Varona Bureau of Agricultural Economics	—Member
Dir. Jose Arcellana National Media Production Center	—Member

2. **Sub-Committee on Finance:**

Miss Josefa M. Mangubat Bureau of Plant Industry	—Disbursing Officer
Mr. Macario Simbulan National Economic Council	—Auditor

3. **Sub-Committee on Public Relations and Publicity:**

Mr. Zosimo L. Falcis Bureau of Plant Industry	—Chairman
Mr. Jose M. Estampador Agricultural Information Division Department of Agriculture and Natural Resources	—Vice Chairman
Mr. Adelino H. Grecia Bureau of Plant Industry	—Member
Mr. Honesto Velasco Bureau of Plant Industry	—Member
Mr. Dalmacio Rogel Bureau of Plant Industry	—Member
Mr. Generoso Moron Agricultural Information Division Department of Agriculture and Natural Resources	—Member

Miss Nellie Anorico —Member
Bureau of Plant Industry

Miss Amelia Balmori —Member
Bureau of Plant Industry

4. **Sub-Committee on Documentation and Secretariat:**

Mr. Honesto R. Mercado —Chairman
Bureau of Plant Industry

Mr. Miguel Hernais —Member
Bureau of Plant Industry

Mrs. Estrella D. Tuazon —Member
Bureau of Plant Industry

Miss Eva O. Bondoc —Member
Bureau of Plant Industry

Mrs. Graciana Almonte —Member
Department of Agriculture and Natural Resources

Mr. Ernie Pascua —Member
Central Cooperative Exchange, Inc.

Mrs. Rosario F. Mercader —Member
Bureau of Plant Industry

Mrs. Consolacion Rosales —Member
Bureau of Plant Industry

Miss Gloria S. Ybe —Member
Bureau of Plant Industry

Miss Monserrat Tinio —Member
Bureau of Plant Industry

Mr. Generoso Jose —Member
Bureau of Plant Industry

Mrs. Elsie Arabes —Member
Bureau of Plant Industry

5. **Sub-Committee on General Services:**

Mr. Benito C. Gonzalo —Chairman
Bureau of Plant Industry

Mr. Arturo S. Flores —Vice Chairman
U. P. College of Agriculture

Mr. Jacinto G. Sison —Member
Bureau of Plant Industry

Mr. Ernesto L. Pacheco —Member
Bureau of Plant Industry

Mr. Ricardo Quizon —Member
Bureau of Plant Industry

Mr. Romeo V. Alonzo —Member
Bureau of Plant Industry

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